



Advancing Stroke Systems of Care to Improve Outcomes

Target: Stroke Phase III

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ACUTE ISCHEMIC STROKE REPERFUSION THERAPY

The benefits of acute ischemic stroke treatment both with intravenous tissue plasminogen activator (tPA) or endovascular therapy are highly time dependent.

Shorter onset to treatment times are associated with improved functional outcomes, lower complication rates, and in some studies lower mortality.

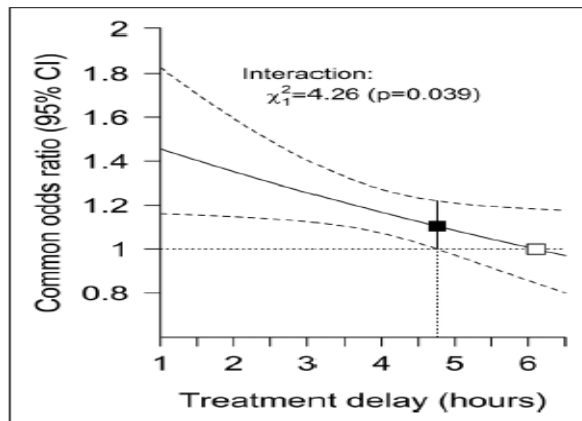
Because of the importance of rapid treatment, AHA/ASA Guidelines recommend a door-to-needle (DTN) time of ≤ 60 minutes for IV alteplase.

Yet prior studies indicated fewer than 30% of IV alteplase treated acute ischemic stroke patients in the United States were meeting this goal.

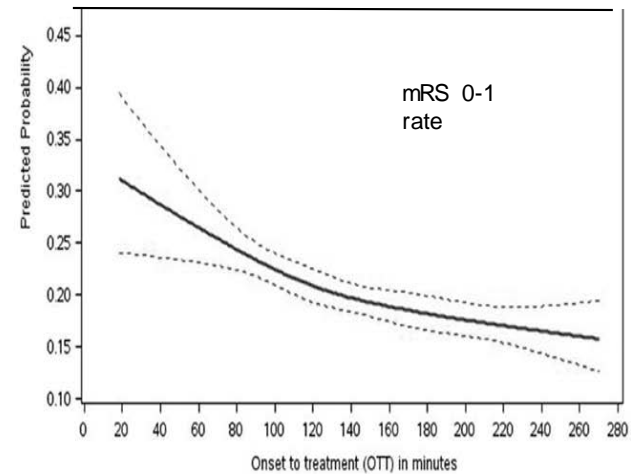
Fonarow GC, Smith EE, Saver JL, Reeves MJ, Bhatt DL, Grau-Sepulveda MV, Olson DM, Hernandez AF, Peterson ED, Schwamm LH. Timeliness of tissue-type plasminogen activator therapy in acute ischemic stroke: patient characteristics, hospital factors, and outcomes associated with door-to-needle times within 60 minutes. *Circulation*. 2011;123(7):750-758.



EFFECT OF INTRAVENOUS ALTEPLASE IS TIME DEPENDENT



*Trials –
Pooled RCTs*



*Practice –
National GWTG-Stroke*

Stroke 2016;47:2373-2379
Circulation 2017;135:128-139

AHA/ASA Guideline Recommendations

EDs should establish standard operating procedures and protocols to triage stroke patients expeditiously (Class I, Level of Evidence B).

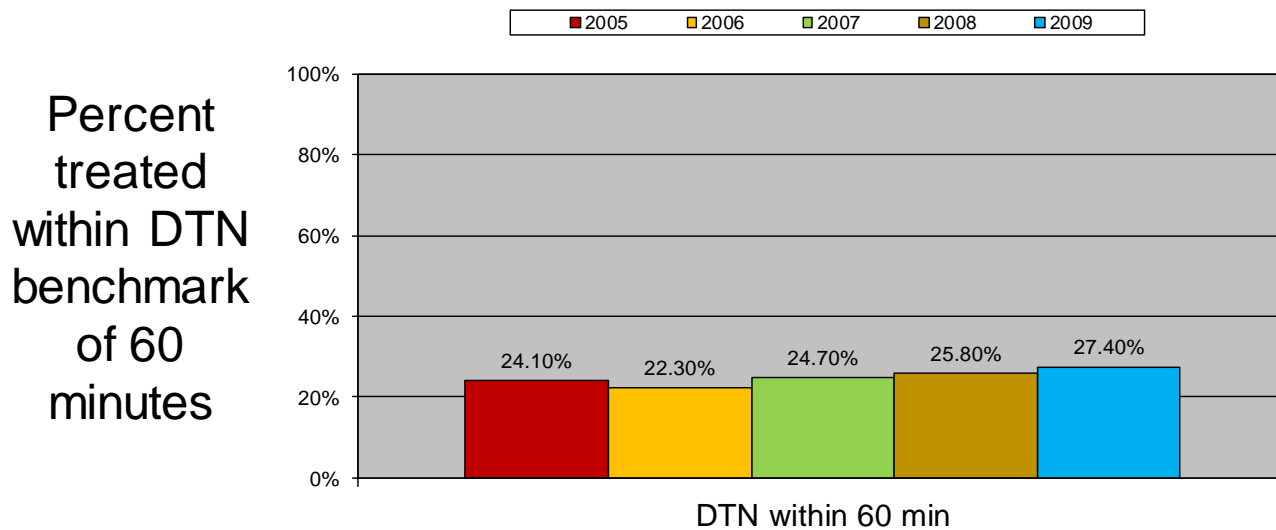
Standard procedures and protocols should be established for benchmarking time to evaluate and treat eligible stroke patients with rt-PA expeditiously (Class I, Level of Evidence B).

Target treatment with rt-PA should be within 1 hour of the patient's arrival in the ED (Class I, Level of Evidence A).

Comprehensive overview of nursing and interdisciplinary care of the acute ischemic stroke patient: a scientific statement from the American Heart Association. *Stroke* 2009;40:2911-2944



Substantial Opportunity to Improve Timeliness of IV alteplase in Ischemic Stroke



Fonarow GC, Smith EE, Saver JL, Reeves MJ, Bhatt DL, Grau-Sepulveda MV, Olson DM, Hernandez AF, Peterson ED, Schwamm LH. Timeliness of tissue-type plasminogen activator therapy in acute ischemic stroke: patient characteristics, hospital factors, and outcomes associated with door-to-needle times within 60 minutes. *Circulation*. 2011;123(7):750-758.



TARGET: STROKE PHASE I

- Target: Stroke was initiated by the AHA/ASA as a national collaborative comprising a broad alliance of hospitals and clinicians.
- The goal of Target: Stroke was for GWTG participating hospitals to treat at least 50% of alteplase treated acute ischemic stroke patients within 60 minutes of hospital arrival.
- An expert working group performed a literature review to identify 10 key evidence-based strategies associated with timely alteplase administration that could be most rapidly and feasibly adopted by hospitals.

Fonarow GC et al. JAMA. 2014;311(16):1632-1640.

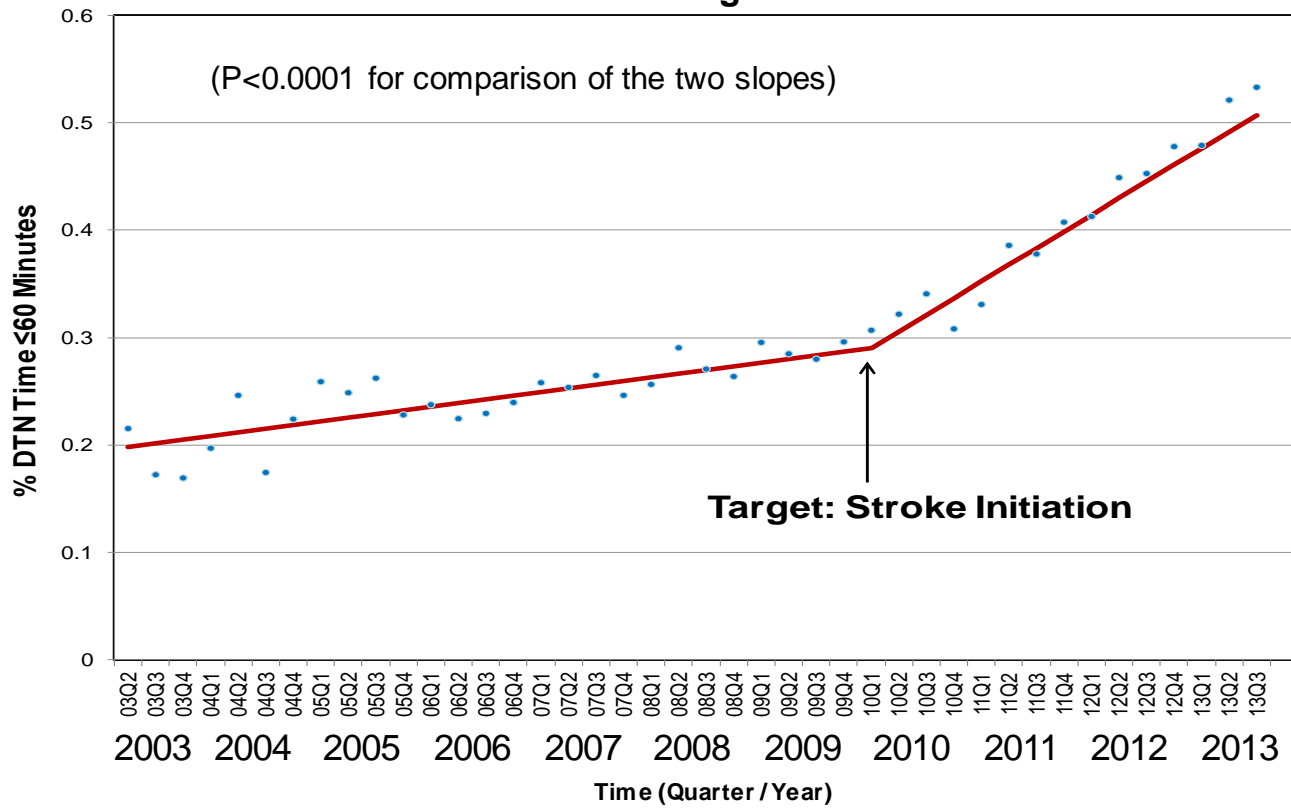


TARGET: STROKE 10 KEY BEST PRACTICE STRATEGIES

1. Hospital pre-notification by Emergency Medical Services
2. Rapid triage protocol and stroke team notification
3. Single call/paging activation system for entire stroke team
4. Use of a stroke toolkit containing clinical decision support, stroke-specific order sets, guidelines, hospital-specific algorithms, critical pathways, NIH Stroke Scale and other stroke tools
5. Rapid acquisition and interpretation of brain imaging
6. Rapid Laboratory Testing (including point-of-care testing) if indicated
7. Pre-mixing alteplase medication ahead of time for high likelihood candidates
8. Rapid access to intravenous alteplase in the ED/brain imaging area
9. Team-based approach
10. Rapid data feedback to stroke team on each patient's DTN time and other performance data



Time Trend in the Proportion of Patients with DTN Times within 60 Minutes Pre- and Post-Target: Stroke





TARGET: STROKE RESULTS: alteplase USE

The Target: Stroke intervention was also associated with an increase in alteplase use.

alteplase use in eligible patients arriving by 2 hours and treated by 3 hours: 64.7% pre- vs. 85.2% post-intervention, $P < 0.0001$

alteplase use in eligible patients arriving by 3.5 hours and treated by 4.5 hours: 22.5% pre- vs. 63.9% post-intervention, $P < 0.0001$

alteplase use among all acute ischemic stroke patients: 5.7% pre- vs. 8.1% post-intervention, $P < 0.0001$

No evidence for unintended consequences with the intervention with alteplase use being avoided in patients who may have less favorable DTN times



Clinical Outcomes Pre- and Post-Target: Stroke in Patients in Patients with Onset to Treatment Time within 4.5 Hours

Outcome	Pre-Target: Stroke (n=29,986)	Post-Target: Stroke (n=53,234)	P Value	Unadjusted Odds Ratios (95% CI)	P Value	Adjusted Odds Ratios (95% CI)*	P Value*
In-Hospital Mortality	9.95%	8.08%	<0.0001	0.79 (0.75-0.84)	<0.0001	0.90 (0.84-0.95)	0.0004
Discharge Home	37.6%	43.3%	<0.0001	1.25 (1.20-1.29)	<0.0001	1.13 (1.08-1.17)	<0.0001
Ambulatory Status Independent	42.2%	45.9%	<0.0001	1.16 (1.10-1.22)	<0.0001	1.02 (0.96-1.09)	0.4538
Symptomatic ICH	5.74%	4.74%	<0.0001	0.81 (0.75-0.88)	<0.0001	0.84 (0.78-0.92)	<0.0001
Any alteplase Complications	6.75%	5.54%	<0.0001	0.80 (0.75-0.86)	<0.0001	0.84 (0.78-0.91)	<0.0001

*Adjusted for patient characteristics including age, sex, race, medical history of atrial fibrillation, prosthetic heart valve, previous stroke/transient ischemic attack, coronary heart disease or prior myocardial infarction, carotid stenosis, peripheral vascular disease, hypertension, dyslipidemia, and current smoking, stroke severity (NIHSS), arrival time during regular work hours, arrival mode, onset-to-arrival time; hospital characteristics of hospital size, region, teaching status, certified primary stroke center, annual volume of tPA, and annual stroke discharge.

Fonarow GC et al. JAMA. 2014;311(16):1632-1640.

Target: Stroke Phase II



TARGET: STROKE PHASE II

NATIONAL GOAL:

- Achieve DTN times within 60 minutes for 75% of eligible patients
- Achieve DTN times within 45 minutes for 50% of eligible patients

ADDITIONAL HOSPITAL RECOGNITION

- Target: Stroke Honor Roll: existing criteria
- Target: Stroke Honor Roll Elite: DTN \leq 60 minutes in 75% of eligible patients
- Target: Stroke Honor Roll Elite-Plus: DTN \leq 60 minutes in 75% of eligible patients and DTN \leq 45 minutes in 50% of patients



ADDITIONAL TARGET: STROKE RESOURCES

- Updated time tracker and new tools
- Additional strategies (transfer patient directly to CT, timer or clock at bedside) and evidence
- New educational resources



TARGET: STROKE PHASE II 12 KEY BEST PRACTICE STRATEGIES

1. Hospital pre-notification by Emergency Medical Services
2. Rapid triage protocol and stroke team notification
3. Single call/paging activation system for entire stroke team
4. Use of a stroke toolkit containing clinical decision support, stroke-specific order sets, guidelines, hospital-specific algorithms, critical pathways, NIH Stroke Scale and other stroke tools
5. Timer or clock attached to chart, clipboard, or bed
6. Transfer directly to CT/MRI scanner
7. Rapid acquisition and interpretation of brain imaging
8. Rapid Laboratory Testing (including point-of-care testing) if indicated
9. Pre-mixing alteplase medication ahead of time for high likelihood candidates
10. Rapid access to intravenous alteplase in the ED/brain imaging area
11. Team-based approach
12. Rapid data feedback to stroke team on each patient's DTN time and other performance data

Updated from Fonarow GC et al Stroke. 2011;42:2983-2989.

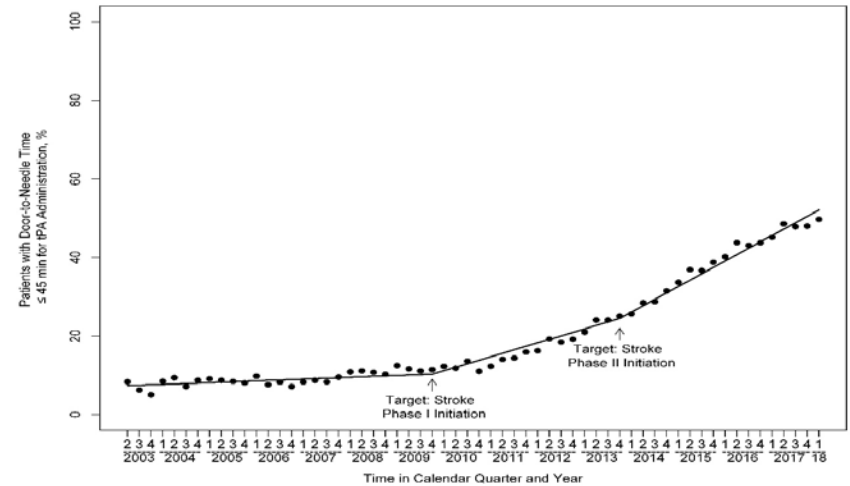
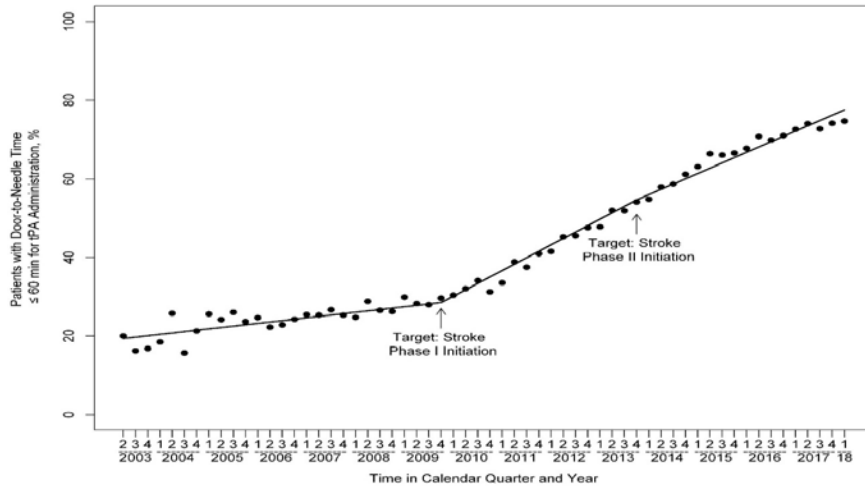
- Target: Stroke Phase II was launched in 2014 with a goal of improving DTN times to ≤ 60 min in 75% and ≤ 45 min in 50% of patients.
- This study aimed to assess whether DTN times and outcomes could be further improved with the launch of Target: Stroke Phase II in Q1 2014.
- Rates of DTN times ≤ 60 minutes and ≤ 45 minutes were compared between pre-Target: Stroke (2003-2009), Phase I (2010-2013), and Phase II (2014 to 2018) periods using weighted linear regression.
- Treatment rates and clinical outcomes of in-hospital mortality, discharge home, and ambulatory status, symptomatic ICH within 36 hours were compared using GEE and adjusting for pre-specified covariates including NIHSS.
- There were 154,221 intravenous alteplase treated patients from 913 GWTG-Stroke hospitals participating during all the study periods.



Time Trend in DTN Times within 60 and 45 Minutes Pre-Target: Stroke, Target: Stroke Phase I, and Target: Stroke Phase II

DTN \leq 60 Minutes

DTN \leq 45 Minutes





- Median DTN times significantly declined from Pre-Target: Stroke, to Phase I to Phase II: 78 minutes (IQR 47-81) to 66 minutes (IQR 51-87) to 50 minutes (IQR 37-66), absolute difference -28 minutes, (P<0.0001).
- The % of patients with DTN times ≤ 60 minutes increased from Pre-Target: Stroke to Phase I to Phase II: 26.5% to 42.7% to 68.4%, absolute difference +41.9%, (P<0.0001). In Q3 2018, 75.4% of patients had DTN times ≤ 60 minutes (**GOAL met**).
- The % of patients with DTN times ≤ 45 minutes also increased from Pre-Target: Stroke to Phase I to Phase II: 10.0% to 17.7% to 41.4%, absolute difference +31.4%, (P<0.0001). In Q3 2018, 51.7% of patients had DTN times ≤ 45 minutes (**GOAL met**).



Clinical Outcomes Pre-Target: Stroke, Target: Stroke Phase I, and Target: Stroke Phase II

Outcome	Pre-Target: Stroke (n=24,365)	Post-Target: Stroke Phase I (n=44,257)	Post-Target: Stroke Phase II (74,447)	P value	Adjusted OR 95% CI (Phase I vs Pre Target: Stroke)	Adjusted OR 95% CI (Phase II vs Pre Target: Stroke)
In-Hospital Mortality	10.0%	8.2%	6.2%	<0.0001	0.85 (0.80-0.91)	0.72 (0.67-0.77)
Discharge Home	35.8%	41.5%	49.0%	<0.0001	1.21 (1.16-1.27)	1.35 (1.27-1.45)
Ambulatory Status Independent	41.5%	44.6%	52.7%	<0.0001	1.05 (0.99-1.22)	1.35 (1.27-1.45)
Symptomatic ICH within 36 Hours	5.7%	4.5%	3.6%	<0.0001	0.79 (0.72-0.86)	0.67 (0.61-0.73)



TARGET STROKE PHASE II

The timeliness of thrombolytic administration improved in GWTG-Stroke hospitals after initiation of Phase II of the Target: Stroke quality initiative. The national goals were achieved in 2018.

Target: Stroke Phase II was associated with additional improvements in clinical outcomes.

The results of this study provide further evidence supporting the favorable impact of Target: Stroke.

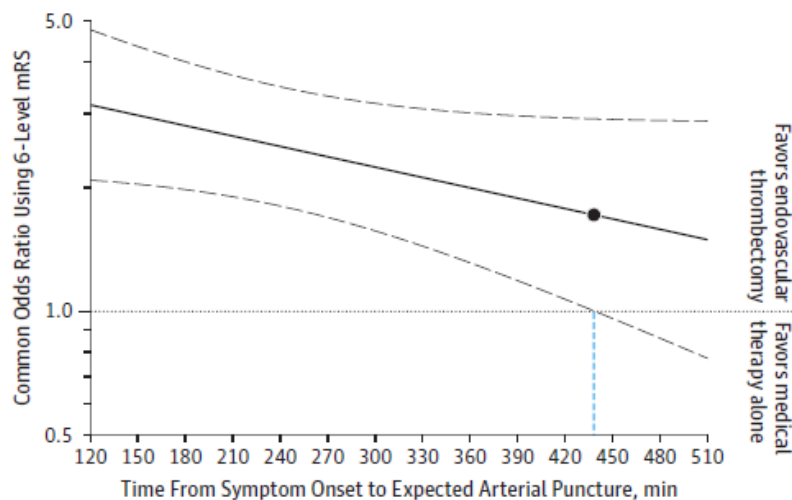
Nevertheless, there remain opportunities to further improve the timeliness of acute ischemic stroke care including the timeliness of endovascular therapy.

TARGET: STROKE PHASE III

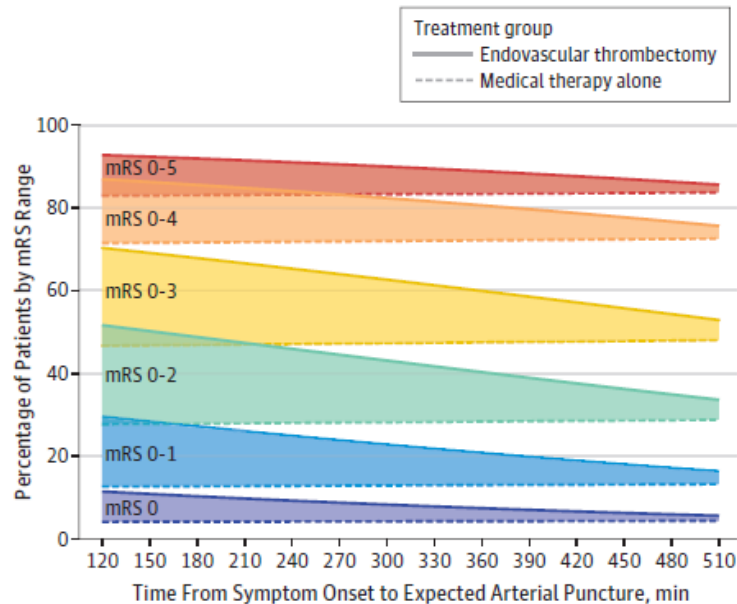
Association Of Time From Symptom Onset To Start Of Endovascular Thrombectomy (Arterial Puncture) With Disability Levels At 3 Months In Endovascular (N = 633) Vs Medical Therapy (N = 645) Groups

Figure 1. Association of Time From Symptom Onset to Expected Time of Endovascular Thrombectomy Procedure Start (Arterial Puncture) With Disability Levels at 3 Months in Endovascular (n = 633) vs Medical Therapy (n = 645) Groups

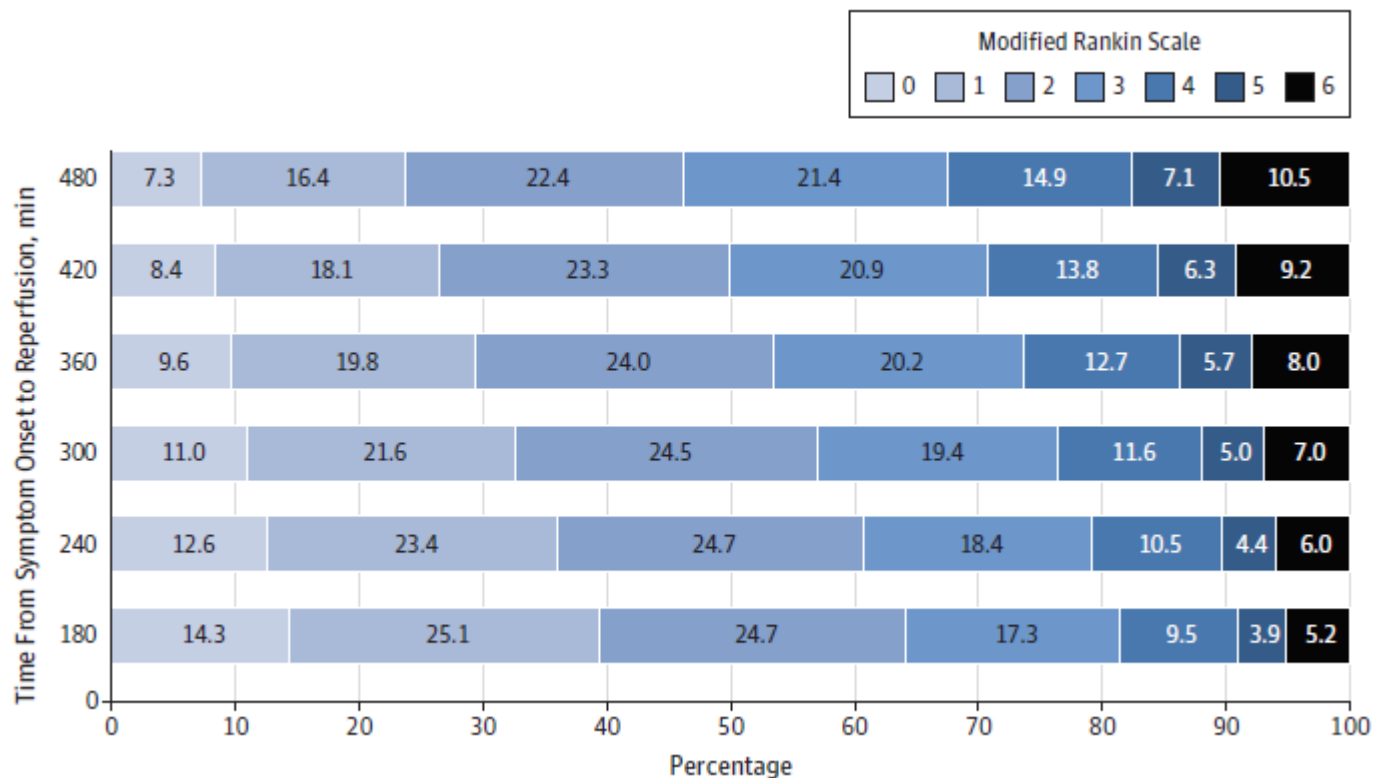
A Odds ratio for less disability at 3 mo in endovascular thrombectomy vs medical therapy alone groups by time to treatment



B Difference in adjusted 3-mo disability rates between endovascular thrombectomy and medical therapy alone groups by time to treatment



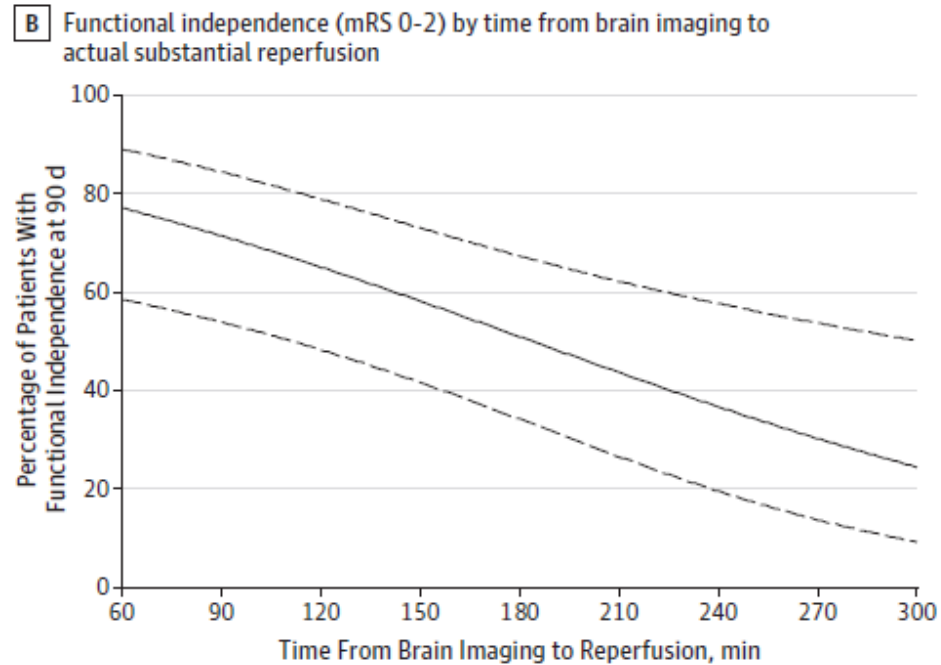
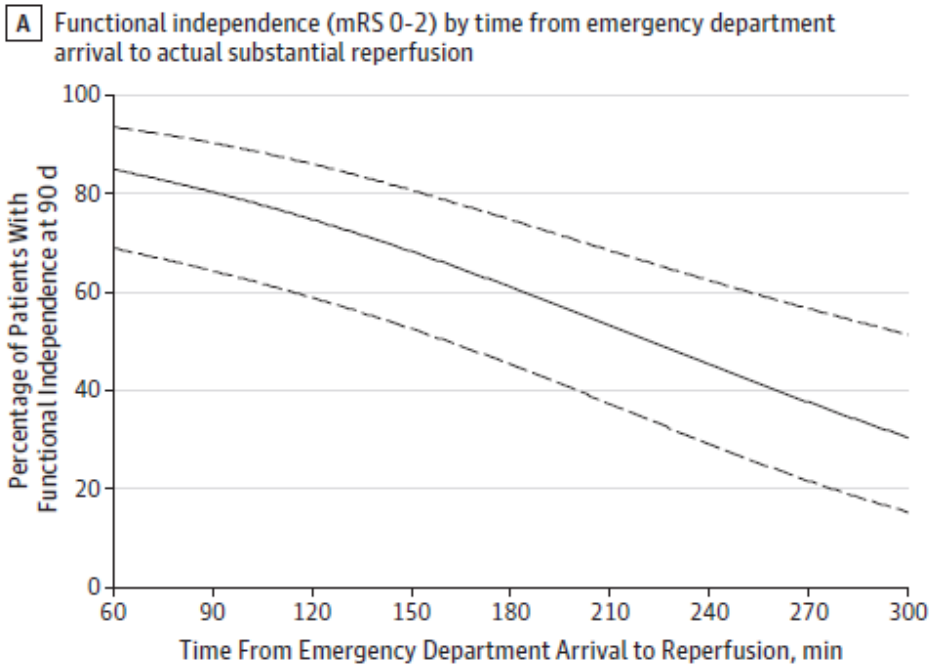
Association Of Time From Symptom Onset To Actual Reperfusion Among Patients In The Endovascular Thrombectomy Group Achieving Substantial Reperfusion With 90-day Disability Outcomes Using An Adjusted Ordinal Logistic Regression Model



Data are from the 390 endovascular group patients in whom substantial reperfusion (modified TIC1 2b/3) was achieved. Rows are intercepts from a single model using all 390 patients, treating time as a continuous variable. Model adjusted for age, sex, baseline stroke severity, target occlusion location, and concomitant intravenous alteplase.



Relation Between In-hospital Treatment Speeds And Functional Independence (mRS 0-2) At 3 Months Among Direct Arrival Patients In The Endovascular Thrombectomy Group Achieving Substantial Reperfusion (mTICI Score 2b Or 3)



Data are from the 390 endovascular group patients in whom substantial reperfusion (modified TICI 2b/3) was achieved. Rows are intercepts from a single model using all 390 patients, treating time as a continuous variable. Model adjusted for age, sex, baseline stroke severity, target occlusion location, and concomitant intravenous alteplase. Curves were obtained from logistic regression of outcome on time as a continuous variable, after an adjustment for age, sex, baseline NIHSS, target occlusion location, and concomitant intravenous alteplase. Solid curves indicate point estimates. Dashed curves indicate 95% CIs.



The common odds ratio for improved functional outcome with endovascular therapy, adjusted for these variables, was 3.1 (95% ci, 1.8-5.4). There was **no significant interaction** between this treatment effect and **age** ($P = .93$), **NIHSS** ($P = .87$), **time** to randomization ($P = .56$), **imaging** modality ($P = .49$), or **location** of the arterial occlusion ($P = .54$). [DEFUSE3 Study]

Figure 2. Endovascular Treatment Effect and Probability of Functional Independence

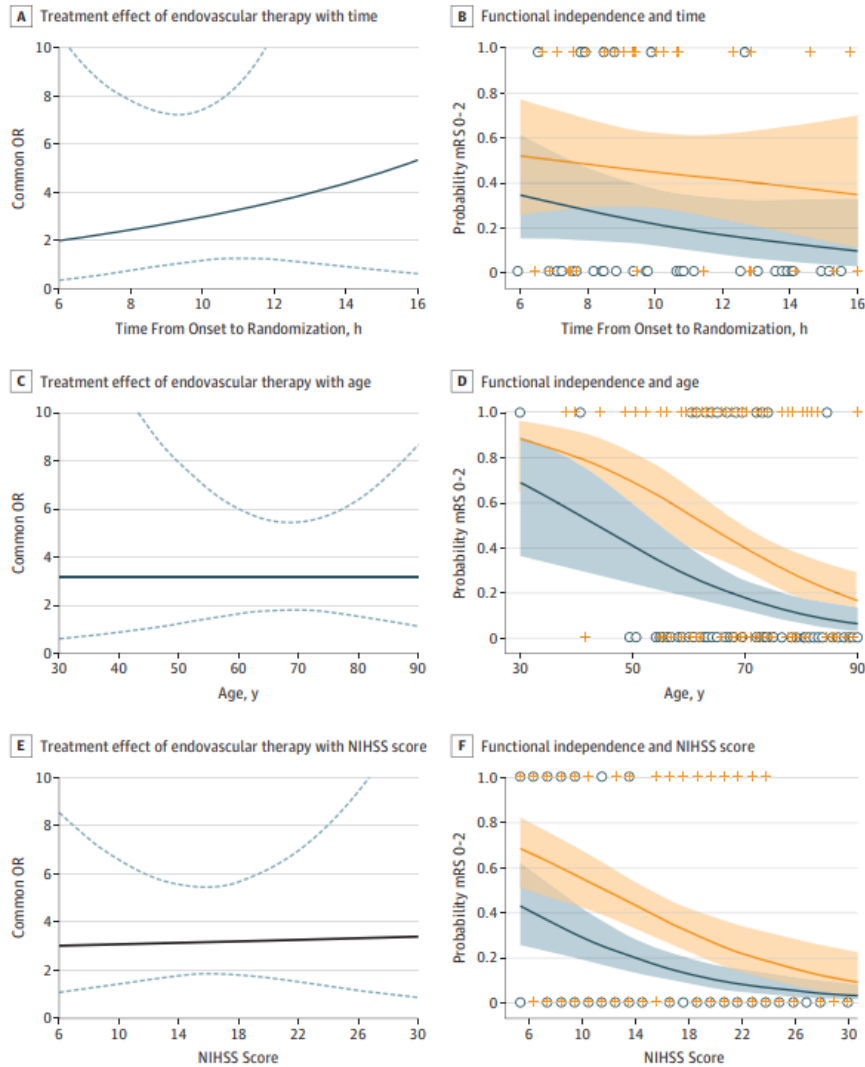
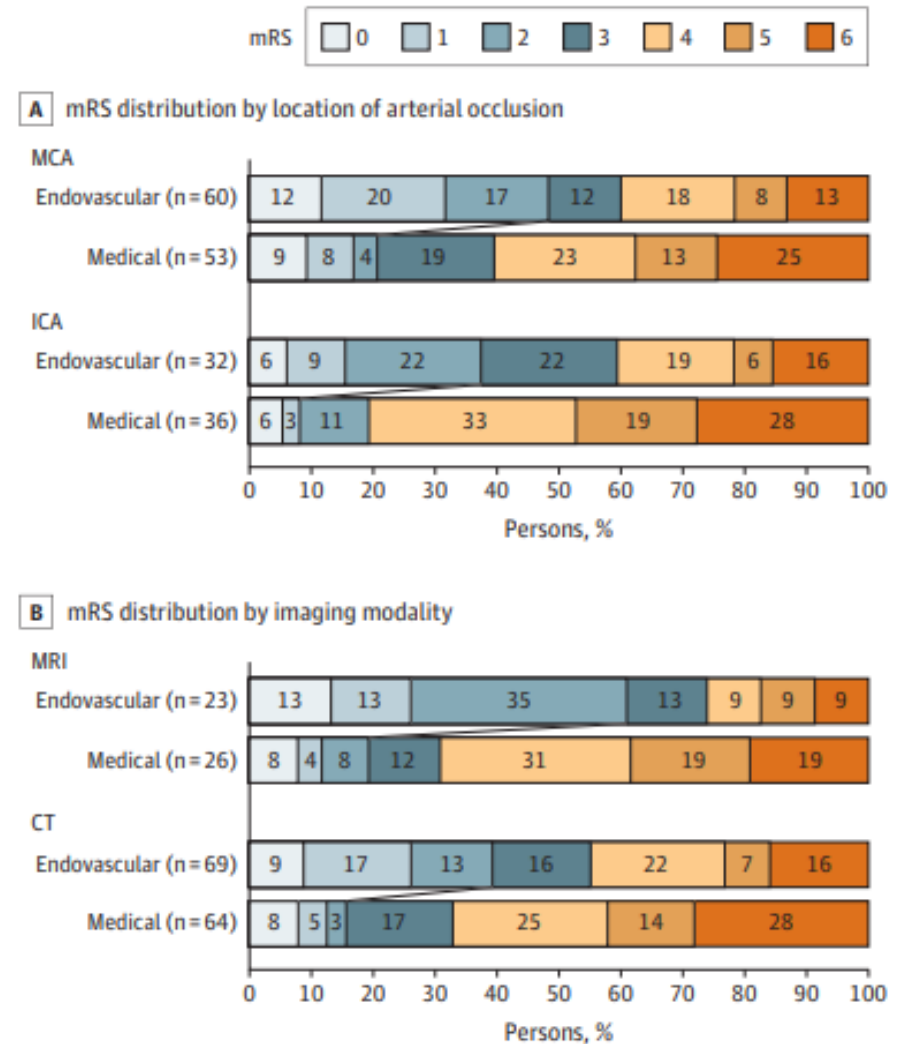


Figure 3. Distribution of Scores on the Modified Rankin Scale (mRS) at Day 90



TARGET: STROKE PHASE III NATIONAL GOALS

PRIMARY GOALS:

- Achieve door-to-needle times within 60 minutes in 85% or more of acute ischemic stroke patients treated with IV thrombolytics
- Achieve **door-to-device** times (arrival to first pass of **thrombectomy** device) in 50% or more of eligible acute ischemic stroke patients within 90 minutes (for direct arriving patients) and within 60 minutes (for transfer patients) treated with endovascular therapy (EVT)

SECONDARY GOALS:

- Achieve door-to-needle times within 45 minutes in 75% or more of acute ischemic stroke patients treated with IV thrombolytics
- Achieve door-to-needle times within 30 minutes in 50% or more of acute ischemic stroke patients treated with IV thrombolytics



Target: Stroke Phase III Door-to-Device Time Key Best Practice Strategies

Target: Stroke advocates the adoption of these 12 key best practice strategies for reducing door-to-device times for endovascular therapy in acute ischemic stroke.

1. Rapid Administration of Alteplase
2. Rapid Acquisition and Interpretation of CT/MR Angiography
3. Rapid Acquisition and Interpretation of Additional Imaging
4. Pre-Notification and Rapid Activation of the Neurointerventional Team
5. Rapid Availability of the Neurointerventional Team
6. Timer or Clock Attached to Chart, Clip Board, or Bed
7. Transfer Directly to Neuroangiography Suite
8. Transfer Directly from Brain Imaging Suite to Neuroangiography Suite
9. Endovascular Therapy Ready Neuroangiography Suite
10. Team Based Approach
11. Anesthesia Access and Protocols
12. Prompt Data Feedback



TARGET: STROKE PHASE III RECOGNITION

- HONOR ROLL
- HONOR ROLL ELITE
- HONOR ROLL ELITE PLUS
- HONOR ROLL ADVANCED THERAPY

RECOGNITION CRITERIA

	TARGET: STROKE PHASE II	TARGET: STROKE PHASE III
HONOR ROLL	Time to thrombolytic therapy within 60 minutes in 50% or more of a cute ischemic stroke patients treated with IV tPA	DTN times within 60 minutes for at least 75% of applicable patients are required.
HONOR ROLL ELITE	Time to thrombolytic therapy within 60 minutes in 75% or more of a cute ischemic stroke patients treated with IV tPA	DTN times within 60 minutes for at least 85% of applicable patients are required.
HONOR ROLL ELITE PLUS	Time to thrombolytic therapy within 60 minutes in 75% or more of a cute ischemic stroke patients treated with IV tPA AND time to thrombolytic therapy within 45 minutes in 50% of a cute ischemic stroke patients treated with IV tPA	DTN times within 45 minutes for at least 75% of applicable patients and DTN times within 30 minutes for at least 50% of applicable patients.
HONOR ROLL ADVANCED THERAPY	-	DTD times in at least 50% of applicable patients within 90 minutes for direct arriving and within 60 minutes for transfers

Recognition Eligibility

- Must currently hold Gold, Silver or Bronze performance achievement status in Get With The Guidelines[®]-Stroke
- At minimum, met the goal of door-to-needle (DTN) times as specified for each award in applicable patients (minimum of six patients) for at least one calendar quarter for the initial honor roll award and 4 consecutive quarters for renewal of the honor roll and initial or renewal of honor roll elite or honor roll elite plus.
- Honor Roll Advanced Therapy requires door-to-device (DTD) times in applicable patients (minimum of six patients that qualify for the measure denominator, such that the total of direct arriving or transfer is six or more) for at least one quarter for initial award and for 4 consecutive quarters for renewal of the honor roll advanced therapy.

Recognition Eligibility (continued)

- Either the Time to Intravenous Thrombolytic therapy - 60 min or Door to IV rt-PA in 60 min (historic-quality) measure may be used to qualify.
 - Comparable measure constructs for 45 minute and 30 minutes may be used as well.
- For Honor Roll Advanced Therapy, patients with arrival times >6 hours after last known well can be included or excluded at the discretion of participating hospitals but this decision must be applied consistently to all to all endovascular patients.

Conclusions

- Findings from Target: Stroke Phase I and II support the favorable impact of applying performance improvement techniques: identifying best practices, clinical decision support, guideline-driven care improvement tools, educational outreach, collaborative support, performance profiling, feedback, and recognition.
- Programs to facilitate rapid administration of thrombolytics such as Target: Stroke have substantially improved care and outcomes and should be applied globally
- Target: Stroke Phase II goals were achieved
- Target: Stroke Phase III aims to facilitate and incentive hospitals and stroke systems of care to provide IV thrombolytic and endovascular therapy to eligible patients with acute ischemic stroke in a timely fashion.
- Target: Stroke Phase III is designed to further improve care and outcomes for patients with acute ischemic stroke.

TARGET: STROKE PHASE III PMT UPDATE

SUMMARY OF UPDATES

- **TARGET: STROKE 3 UPDATES**
 - Stroke / Limited form
 - MER form
 - Measures
- **ADDITIONAL MEASURE UPDATES**
 - DIDO measure
- **TJC LAYER UPDATES**
 - STK-OP-1 and CSTK-01 added to STK layer
 - ASR-IP and ASR-OP measure bundles
- **OPERATIONAL UPDATES**
 - Removed error when not completing advanced imaging questions
 - CSTK benchmarking error when running CSTK-10 report
 - New filter options
 - Additional items

STROKE FORM - REASON FOR DELAY IN IV ALTEPLASE – 30 MINUTES

If IV alteplase was initiated greater than 60 minutes after hospital arrival, were Eligibility or Medical reason(s) documented as the cause for delay: Yes No

If IV alteplase was initiated greater than 45 minutes after hospital arrival, were Eligibility or Medical reason(s) documented as the cause for delay: Yes No

If IV alteplase was initiated greater than 30 minutes after hospital arrival, were Eligibility or Medical reason(s) documented as the cause for delay: Yes No

Eligibility Reason(s): Social/Religious
 Initial refusal
 Care-team unable to determine eligibility

Specify eligibility reason:

Medical Reason(s): Hypertension requiring aggressive control with IV medications
 Further diagnostic evaluation to confirm stroke for patients with hypoglycemia (blood glucose < 50), seizures, or major metabolic disorders
 Management of concomitant emergent/acute conditions such as cardiopulmonary arrest, respiratory failure (requiring intubation)
 Investigational or experimental protocol for thrombolysis

Specify medical reason:

Hospital Related or Other Reason(s): Delay in stroke diagnosis
 In-hospital time delay
 Equipment-related delay
 Other

MER FORM - ADDED “DOCUMENTATION OF FIRST PASS” DATA ELEMENT

^^Was a mechanical endovascular reperfusion procedure attempted during this episode of care (at this hospital)? Yes No

IF “Was a mechanical endovascular reperfusion procedure attempted during this episode of care (at this hospital)?” = Yes, then First Pass question is required

^Is there documentation in the medical record of the first pass of a mechanical reperfusion device to remove a clot occluding a cerebral artery at this hospital? Yes No *Added

^What is the date and time of the first pass of a clot retrieval device at this hospital? *

MM/DD/YYYY HH:MI

- Added to MER form group (previously only on Comprehensive layer)
- Used for collection of first pass time for Target: Stroke Advanced

MER FORM – DOCUMENTATION OF FIRST PASS

Catheter-based/Endovascular Stroke Treatment

^^What is the date and time of skin puncture at this hospital to access the arterial site selected for endovascular treatment of a cerebral artery occlusion?

^^Was a mechanical endovascular reperfusion procedure attempted during this episode of care (at this hospital)? Yes No

^^Are reasons for not performing mechanical endovascular reperfusion therapy documented? Yes No

- Significant pre-stroke disability (pre-stroke mRS > 1)
- No evidence of proximal occlusion
- NIHSS <6
- Brain imaging not favorable/hemorrhage transformation (ASPECTS score <6)
- Groin puncture could not be initiated within 6 hours of symptom onset
- Anatomical reason - unfavorable vascular anatomy that limits access to the occluded artery
- Patient/family refusal
- MER performed at outside hospital
- Allergy to contrast material
- Equipment-related delay *
- No endovascular specialist available *
- Delay in stroke diagnosis *
- Vascular imaging not performed *
- Advanced Age *
- Other *

* These reasons do not exclude from measure population

^^Reasons for not performing mechanical endovascular reperfusion therapy (select all that apply):

- Retrievable stent
- Other mechanical clot retrieval device beside stent retrieval
- Clot suction device

^^If MER treatment at this hospital, type of treatment:

- Intracranial angioplasty, with or without permanent stent
- Cervical carotid angioplasty, with or without permanent stent
- Other

^^What is the date and time of the first pass of a clot retrieval device at this hospital?

Catheter-based/Endovascular Stroke Treatment

^^What is the date and time of skin puncture at this hospital to access the arterial site selected for endovascular treatment of a cerebral artery occlusion?

^^Was a mechanical endovascular reperfusion procedure attempted during this episode of care (at this hospital)? Yes No

^^Are reasons for not performing mechanical endovascular reperfusion therapy documented? Yes No

- Significant pre-stroke disability (pre-stroke mRS > 1)
- No evidence of proximal occlusion
- NIHSS <6
- Brain imaging not favorable/hemorrhage transformation (ASPECTS score <6)
- Groin puncture could not be initiated within 6 hours of symptom onset
- Anatomical reason - unfavorable vascular anatomy that limits access to the occluded artery
- Patient/family refusal
- MER performed at outside hospital
- Allergy to contrast material
- Equipment-related delay *
- No endovascular specialist available *
- Delay in stroke diagnosis *
- Vascular imaging not performed *
- Advanced Age *
- Other *

* These reasons do not exclude from measure population

^^Reasons for not performing mechanical endovascular reperfusion therapy (select all that apply):

- Retrievable stent
- Other mechanical clot retrieval device beside stent retrieval
- Clot suction device
- Intracranial angioplasty, with or without permanent stent
- Cervical carotid angioplasty, with or without permanent stent
- Other

^^If MER treatment at this hospital, type of treatment:

- Retrievable stent
- Other mechanical clot retrieval device beside stent retrieval
- Clot suction device
- Intracranial angioplasty, with or without permanent stent
- Cervical carotid angioplasty, with or without permanent stent
- Other

^^Is there documentation in the medical record of the first pass of a mechanical reperfusion device to remove a clot occluding a cerebral artery at this hospital? Yes No

^^What is the date and time of the first pass of a clot retrieval device at this hospital?

Will impact sites with MER form group active and not Comprehensive.

UPDATED TARGET: STROKE MEASURES

REPORT 1	
GWTG Standard Measures:	Select Measure
GWTG Enhanced Version & Special Initiative Measures:	Select Measure
GWTG Additional Patient Population Measures:	Consensus Measure Set by Clinical Diagnosis **Consensus-CDC/COV Set**
Historic Measures:	**Consensus-GWTG/PAA Set** Additional Measure Groups **GWTG Stroke Quality Measures**
Format:	**GWTG Target Stroke Set**
	Achievement IV Alteplase Arrive by 2 Hour, Treat by 3 Hour Early Antithrombotics VTE Prophylaxis

REPORT 1	
GWTG Standard Measures:	**GWTG Target Stroke Set**
GWTG Enhanced Version & Special Initiative Measures:	LDL Documented Intensive Statin Therapy IV Alteplase Arrive by 3.5 Hour, Treat by 4.5 Hour
GWTG Additional Patient Population Measures:	NIHSS Reported
Historic Measures:	Reporting Door-in-Door-Out Times at First Hospital Prior to Transfer for Acute Therapy
Format:	% No IV Alteplase 3 Hour % No IV Alteplase 4.5 Hour

REPORT 1	
GWTG Standard Measures:	Time to Intravenous Thrombolytic Therapy - 30 min
GWTG Enhanced Version & Special Initiative Measures:	Reasons for no IV Alteplase (Hospital-Related) Reasons for no IV Alteplase Smoking Cessation Therapies Prescribed
GWTG Additional Patient Population Measures:	Time to Intravenous Thrombolytic Therapy - 30 min
Historic Measures:	Time to Intravenous Thrombolytic Therapy - 45 min Time to Intravenous Thrombolytic Therapy Times

Added:

- Door-in-Door-Out Times at First Hospital Prior to Transfer for Acute Therapy
- Time to Intravenous Thrombolytic Therapy - 30 min
- Door to Start of Revascularization (DTR) within 60 minutes for patients transferred from an outside hospital OR 90 minutes for patients presenting directly.

New Reporting Measures

UPDATE "TIME TO INTRAVENOUS THROMBOLYTIC THERAPY - 45 MIN" MEASURE LOGIC

REPORT 1

GWTC Standard Measures:	Select Measure	Percent of acute ischemic stroke patients receiving intravenous tissue plasminogen activator (alteplase) therapy during the hospital stay who have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 45 minutes or less.
GWTC Enhanced Version & Special Initiative Measures:	Time to Intravenous Thrombolytic Therapy - 45 min	
GWTC Additional Patient Population Measures:	Select Measure	
Historic Measures:	Select Measure	
Format:	Patient Records	
Compare to: (ctrl-click to select multiple)	<input type="checkbox"/> My Hospital <input type="checkbox"/> All AZ Hospitals <input type="checkbox"/> All Hospitals <input type="checkbox"/> Mountain <input type="checkbox"/> West Region Hospitals	

Patient Records Report for measure Time to Intravenous Thrombolytic Therapy - 45 min

Percent of acute ischemic stroke patients receiving intravenous tissue plasminogen activator (alteplase) therapy during the hospital stay who have a time from hospital arrival to initiation of thrombolytic therapy administration (door-to-needle time) of 45 minutes or less.

Time Period: Q1 2019 - Q1 2019; Site: AHA Demo test- Stroke + CSTK + STK (88250)

Patients Included: 0; Patients Excluded: 4

Patients in Numerator: 0; % in Numerator:

Show filters This report shows all records. 4 of 4

Patient ID	Included in Results?	In Numerator?	Age:	Patient location when stroke symptoms discovered:	Hospital Arrival Date and Time	IV Alteplase Initiation Date/Time	When was the patient last known to be well?	Cause for IV alteplase delay - 45 minutes	Cause for IV alteplase delay Eligibility Reason(s)	Cause for IV alteplase delay Medical Reason(s)	Clinical Trial	IV alteplase at an outside hospital or EMS / Mobile Stroke Unit?	Final clinical diagnosis related to stroke:	IV alteplase initiated at this hospital?
Test101	Excluded		37	Not in a healthcare setting	01/01/2019 10:00		01/01/2019 09:00				No		Ischemic Stroke	No
Test202	Excluded		68	Not in a healthcare setting	01/08/2019 10:00	01/08/2019 11:00	01/08/2019 09:00	Yes	Care-team unable to determine eligibility		No	No	Ischemic Stroke	Yes
Test303	Excluded		78	Another acute care facility	02/01/2019 10:00		02/01/2019 08:00				No	Yes	Ischemic Stroke	No
Test404	Excluded		63	Not in a healthcare setting	01/01/2019 10:00		01/01/2019 09:00				No	Yes	Ischemic Stroke	No

ADDED MEASURE - DOOR TO START OF REVASCULARIZATION

REPORT 1

Stroke Measure Logic and Ratio
 Measure Descriptions - Stroke I
 Measure Descriptions - Post Ho
 Measures

GWTG Standard Measures: Select Measure Select Measure

GWTG Enhanced Version & Special Initiative Measures: Select Measure

GWTG Additional Patient Population Measures: Select Measure

Historic Measures:

Format:

Compare to: (ctrl-click to select multiple)

Mechanical Endovascular Reperfusion Therapy
 MER Measure Set
 90-Day Modified Rankin Scores (mRS) following Mechanical Endovascular Reperfusion Therapy (Graphical Display of Distribution)
 Discharge Disposition following Mechanical Endovascular Reperfusion Therapy (Graphical Display of Distribution)
 Door to Puncture (DTP) Time within 90 minutes
 Door to Puncture (DTP) Times (Graphical Display of Distribution)
 Door to Recanalization/Reperfusion (DTRp) Times (Graphical Display of Distribution)
 Door to Recanalization/Reperfusion (DTRp) within 120 Minutes
 Door to Start of Revascularization (DTR) Times (Graphical Display of Distribution)
Door to Start of Revascularization (DTR) within 60 minutes for patients transferred from an outside hospital OR 90 minutes for patients presenting directly.
 Door to Start of Revascularization (DTR) within 120 minutes
 Mechanical Endovascular Reperfusion Therapy for Eligible Patients with Ischemic Stroke
 Picture to Puncture (PTP) Time within 60 minutes
 Picture to Puncture (PTP) Times (Graphical Display of Distribution)

Patient Records Report for measure Door to Start of Revascularization (DTR) within 60 minutes for patients transferred from an outside hospital OR 90 minutes for patients presenting directly.

Percentage of patients with acute ischemic stroke who receive mechanical endovascular reperfusion therapy and for whom the first pass (i.e., deployment) of the device is <= 60 minutes in patients who are transferred in from an outside hospital or < 90 minutes for patients presenting directly.
 Time Period: Jan 2019 - Mar 2019; Site: AHA UAT Site - Stroke + MER (91870)
 Patients Included: 2; Patients Excluded: 1
 Patients in Numerator: 1; % in Numerator: 50.0%; Patient in Exceptions: 0

Show filters This report shows all records. 3 of 3

Patient ID	Included in Results?	In Numerator?	Exception?	Age:	Final clinical diagnosis related to stroke:	First Pass of a Mechanical Reperfusion Device	Patient location when stroke symptoms discovered:	Hospital Arrival Date and Time	First Pass Date/Time	Discharge Date:	Elective Carotid Intervention	MER delay documented	MER Reasons for delay	How patient arrived at your hospital
3563q	Included	No	No	68	Ischemic Stroke	Yes	Not in a healthcare setting	01/01/2019 10:00	01/01/2019 11:40	01/05/2019 10:00	No	No		Transfer from other hospital
3563t	Included	Yes		78	Ischemic Stroke	Yes	Not in a healthcare setting	01/01/2019 10:00	01/01/2019 10:50	01/03/2019 10:00	No	No		Transfer from other hospital Private

ADDITIONAL MEASURE UPDATES

DOOR-IN-DOOR-OUT TIMES AT FIRST HOSPITAL PRIOR TO TRANSFER FOR ACUTE THERAPY

REPORT 1		
GWTG Standard Measures:	**GWTG Target Stroke Set**	Meas: need Honc
GWTG Enhanced Version & Special Initiative Measures:	LDL Documented Intensive Statin Therapy IV Alteplase Arrive by 3.5 Hour, Treat by 4.5 Hour NIHSS Reported	
GWTG Additional Patient Population Measures:	Reporting	
Historic Measures:	Door-in-Door-Out Times at First Hospital Prior to Transfer for Acute Therapy	
Format:	% No IV Alteplase 3 Hour % No IV Alteplase 4.5 Hour	

Patient Records Report for measure Door-in-Door-Out Times at First Hospital Prior to Transfer for Acute Therapy

Percentage of confirmed stroke patients transported to your hospital by EMS and for whom <= 90 minutes was spent in the ED prior to transfer to a higher-level stroke center (e.g. PSC, CSC, etc.) for time-critical therapy.
 Time Period: Mar 2019 - Mar 2019; Site: AHA Demo test- GWTG-Stroke + ASR (92490)
 Patients Included: 1; Patients Excluded: 0
 Patients in Numerator: 0; % in Numerator: 0.0%; Patient in Exceptions: 0

Show filters This report shows all records. 1 of 1

Patient ID	Included in Results?	In Numerator?	Exception?	Age:	Final clinical diagnosis related to stroke:	Not admitted	Reason Not Admitted	Patient arrival transfer reason	Patient location when stroke symptoms discovered:	How patient arrived at your hospital	Hospital Arrival Date and Time	Discharge Date:	Clinical Trial (Meaningful Use)	Elective Carotid Intervention	Documented reason for delay in transfer to referral facility?	Specific reason for delay documented in transfer patient (check all that apply):
mar101	Included	No	No	47	Ischemic Stroke	Yes, not admitted	Transferred from your ED to another acute care hospital	Post Management of IV alteplase (e.g. Drip and Ship)	Not in a healthcare setting	EMS from home/scene	03/01/2019 10:00	03/01/2019 12:20		No	Yes	Initial refusal

REASON FOR TRANSFER

Current Study: Stroke PMT Current User: JC-Stroke 1 Site: 1 JC-Stroke Site ID: 38578

Patients Download Reports Data Upload My Account Home

Not Admitted: No, patient admitted as inpatient
 Transferred from your ED to another acute care hospital
 Discharged directly from ED to home or other location that is not an acute care hospital
 Left from ED AMA

Reason Not Admitted: Died in ED
 Discharged from observation status without an inpatient admission
 Other

If patient transferred from your ED to another hospital, specify hospital name: Hospital Not On The List
 Hospital Not Documented

Select reason(s) for why patient transferred: Evaluation for IV alteplase up to 4.5 hours
 Post Management of IV alteplase (e.g. Drip and Ship)
 Evaluation for Endovascular thrombectomy
 Advanced stroke care (e.g., Neurocritical care, surgical or other time critical therapy)
 Patient/family request
 Other advanced care (not stroke related)
 Not documented

Discharge Date: MM/DD/YYYY HH:MI

Documented reason for delay in transfer to referral facility? Yes No/ND

Hispanic Ethnicity:
"Hispanic Ethnicity" is missing.
QSDMA03

Final clinical diagnosis related to stroke:
"Clinical hospital diagnosis related to stroke" is missing.
QSDXA01

When is the earliest documentation of comfort measures only?:
Please enter the earliest documentation of comfort measures only.
ES4

Hospital Arrival Date and Time :
Hospital Arrival Date and Time is required.
EDY0018

Patient arrival transfer reason:
Select reason(s) for why patient transferred. AÇ
ã-ü½ required in patients who have AÇ
ã-Ä" Not Admitted = Yes AÇã-ü½ and AÇ
ã-Ä" Reason not admitted AÇã-ü½ =
Transferred from your ED to another acute care
hospital
QSDA001

Discharge Date:
"Discharge Date" is missing.

Requires "Select reason(s) for why patient transferred" when "Transferred from your ED to another acute care hospital" is selected.

STROKE FORM - REASON FOR DELAY IN TRANSFER

Discharge Date: MM/DD/YYYY HH:MM
02 / 01 / 2019 10 : 40

Documented reason for delay in transfer to referral facility? Yes No/ND

Exceptions *

Specific reason for delay documented in transfer patient (check all that apply):

- Social/religious
- Initial refusal
- Care team unable to determine eligibility
- Management of concomitant emergent/acute conditions such as cardiopulmonary arrest, respiratory failure (requiring intubation)
- Investigational or experimental protocol for reperfusion
- Delay in stroke diagnosis
- In-hospital time delay
- Equipment-related delay
- Need for additional imaging
- Catheter lab not available
- Other

(Door-in-Door-Out Times at First Hospital Prior to Transfer for Acute Therapy)

*Removed from the denominator if present and numerator is not met

INTENSIVE STATIN THERAPY (QUALITY MEASURE)

REPORT 1

GWTG Standard Measures:	Select Measure	Percentage of Ischemic Stroke and TIA patients who are prescribed high-intensity statin therapy at discharge OR, if > 75 years of age, are prescribed at least moderate-intensity statin therapy at discharge.
GWTG Enhanced Version & Special Initiative Measures:	Intensive Statin Therapy	
GWTG Additional Patient Population Measures:	Select Measure	
Historic Measures:	Select Measure	
Format:	Patient Records	
Compare to: (ctrl-click to select multiple)	<ul style="list-style-type: none"> My Hospital All AZ Hospitals All Hospitals Mountain West Region Hospitals All Hospitals (non-expedited) 	

Print | Export to Excel | Export to .csv

Patient Records Report for measure Intensive Statin Therapy

Percentage of Ischemic Stroke and TIA patients who are prescribed high-intensity statin therapy at discharge OR, if > 75 years of age, are prescribed at least moderate-intensity statin therapy at discharge.
 Time Period: Jan 2019 - Mar 2020; Site: 1 JC-Stroke (28978)
 Patients Included: 9; Patients Excluded: 3
 Patients in Numerator: 0; % in Numerator: 0.0%; Patient in Exceptions: 0

Show filters This report shows all records, 5 of 6

Patient ID	Included in Results?	In Numerator?	Exception?	Discharge Date:	Age:	Patient location when stroke symptoms discovered:	Final clinical diagnosis related to stroke:	When is the earliest documentation of comorbidity measures only?	Discharge Status	Discharge Disposition	Evidence of Atherosclerosis	Intensive Statin Therapy	Not admitted	Clinical Trial	Elective Carotid Intervention	LDL:	Cholesterol Reducing Tx:	Statin Medication	Statin Dose	Reason for Not Prescribing Statin Medication at Discharge	Stroke Form Type Bitmap	
12345	Included	No	No	01/29/2019	27		Ischemic Stroke						No, patient admitted as inpatient									1
PAT01	Included	No	No	02/01/2019 00:00	56		Ischemic Stroke	4 - Not Documented/UTD		8 Not Documented or Unable to Determine (UTD)			No, patient admitted as inpatient	No	No							1
PAT19	Included	No	No	02/07/2019 00:00	56		Ischemic Stroke						No, patient admitted as inpatient	No	No							1
1234	Excluded			01/01/2019 01:00	28								No, patient admitted as inpatient									1
numfilter01	Excluded			02/11/2019 00:00	31	Not in a healthcare setting	Ischemic Stroke			2 Hospice - Home		NC	No, patient admitted as inpatient				None - contraindicated			Yes		1
PAT28	Excluded			02/27/2019 00:00	9	Stroke occurred after hospital arrival (in ED/Outpatient)	Ischemic Stroke						Yes	No, patient admitted as inpatient				Statin	Amlodipine + Atorvastatin (Caduet)	5/10 mg	No	1

Date of report: 02/28/2019 04:11:39 GMT-05:00 run by User: JC-Stroke 1 (jgstroke) at Site: 1 JC-Stroke (28978) in Stroke PMF
 Please note: GWTG aggregate comparative data is intended for internal quality improvement. Permission is required from the American Heart Association and Quintiles for external presentation or publication of benchmark data.



UPDATED PRE-NOTIFICATION MEASURE

REPORT 1

GWTC Standard Measures:	Select Measure	Percent of cases of advanced notification by EMS for patients transported by EMS from scene.
GWTC Enhanced Version & Special Initiative Measures:	Pre-notification	
GWTC Additional Patient Population Measures:	Select Measure	
Historic Measures:	Select Measure	
Format:	Patient Records	
Compare to: (ctrl-click to select multiple)	<ul style="list-style-type: none"> My Hospital All AZ Hospitals All Hospitals Mountain West Region Hospitals 	

Added:
Inclusion – Arrived by MSU

Patient Records Report for measure Pre-notification

Percent of cases of advanced notification by EMS for patients transported by EMS from scene.
 Time Period: Q1 2019 - Q1 2019; Site: AHA Demo test- Stroke + CSTK + STK (88250)
 Patients Included: 2; Patients Excluded: 2
 Patients in Numerator: 2; % in Numerator: 100.0%

Show filters This report shows all records. 4 of 4

Patient ID	Included in Results?	In Numerator?	How patient arrived at your hospital	Age:	Final clinical diagnosis related to stroke:	Clinical Trial	Elective Carotid Intervention	Advanced notification by EMS or MSU?
Test202	Included	Yes	EMS from home/scene	68	Ischemic Stroke	No	No	Yes
Test404	Included	Yes	Mobile Stroke Unit	63	Ischemic Stroke	No	No	Yes
Test101	Excluded		Private transport/taxi/other from home/scene	37	Ischemic Stroke	No	No	
Test303	Excluded		Transfer from other hospital	78	Ischemic Stroke	No	No	

UPDATED MEDICAL HISTORY MEASURE

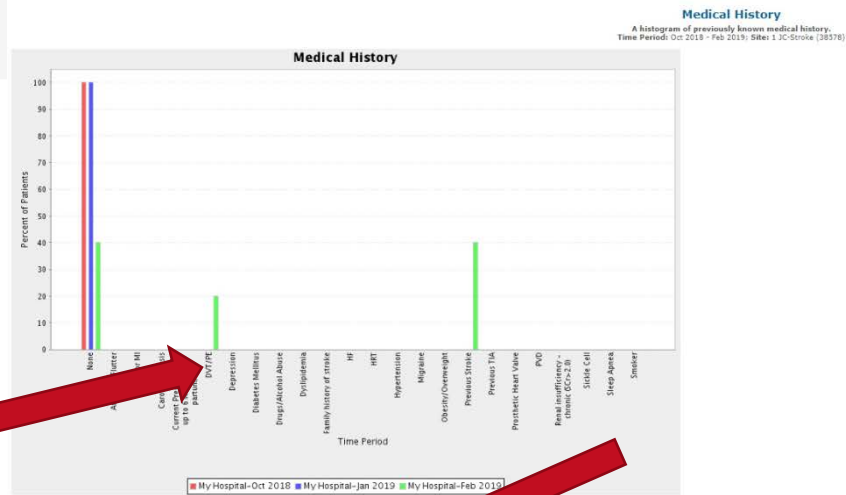
REPORT 1

GWTG Standard Measures:
 GWTG Enhanced Version & Special Initiative Measures:
 GWTG Additional Patient Population Measures:
 Historic Measures:
 Format:
 Compare to: (ctrl-click to select multiple)

A histogram of previously known medical history.

Meat
Stro
Mea
Mea
Mea
Mea
Mea

Added:
Inclusion – DVT/PE



Medical History
Time periods/Categories at the end of the graph and data table have been omitted because there were no patient records during that time.

Benchmark Group	Time Period	None	Atrial Fibr/Flutter	CAD/Prior MI	Carotid Stenosis	Current Pregnancy (or up to 6 weeks post partum)	DVT/PE	Depression	Diabetes Mellitus	Drugs/Alcohol Abuse	Dyslipidemia	Family history of stroke	HF	HRT	Hypertension	Migraine	Obesity/Overweight	Previous Stroke	Previous TIA	Prosthetic Heart Valve	PVD	Renal Insufficiency - Chronic (SCr > 2.0)	Sickle Cell	Sleep Apnea	Smoker	Total
My Hospital	Oct 2018	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1
	Nov 2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Dec 2018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Jan 2019	2 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Feb 2019	2 (40%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (20%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2 (40%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5

UPDATE MECHANICAL ENDOVASCULAR REPERFUSION THERAPY FOR ELIGIBLE PATIENTS WITH ISCHEMIC STROKE MEASURE

REPORT 1

GWTG Standard Measures: Select Measure

GWTG Enhanced Version & Special Initiative Measures: Mechanical Endovascular Reperfusion Therapy for Eligible Patients with Ischemic Stroke

GWTG Additional Patient Population Measures: Select Measure

Historic Measures: Select Measure

Format: Patient Records

Compare to: (ctrl-click to select multiple)
 My Hospital
 All AZ Hospitals
 All Hospitals
 Mountain
 West Region Hospitals

Percentage of eligible patients with ischemic stroke due to large vessel occlusion who receive mechanical endovascular reperfusion therapy

meas
Strok
Meas
Meas
Meas
Meas
Meas

Added:
 Inclusion – M2
 Exclusion – Allergy to contrast material

Patient Records Report for measure Mechanical Endovascular Reperfusion Therapy for Eligible Patients with Ischemic Stroke

Percentage of eligible patients with ischemic stroke due to large vessel occlusion who receive mechanical endovascular reperfusion therapy

Time Period: Jan 2019 - Dec 2019; Site: 1 JC-Stroke (38578)

Patients Included: 0; Patients Excluded: 8

Patients in Numerator: 0; % in Numerator: ?; Patient in Exceptions: 1

Show filters This report shows all records. 8 of 8

Patient ID	Included in Results?	In Numerator?	Exception?	Age	Final clinical diagnosis related to stroke:	Target lesion visualized	Site of occlusion:	MER ICA	MER MCA	NIHSS Score Documented Closest to IA Alteplase or MER Initiation	Hospital Arrival Date and Time	When was the patient last known to be well?	Patient location when stroke symptoms discovered:	Discharge Date:	Clinical Trial	Elective Carotid Intervention	Documented reasons for no MER	Reasons for not performing MER	MER at this hospital?	
1234	Excluded			28							12/01/2018 12:00			01/01/2019 01:00						
12345	Excluded			27	Ischemic Stroke						12/01/2018	01/23/2019 00:00		01/29/2019						Yes
numfilter01	Excluded			31	Ischemic Stroke						02/10/2018 01:00	02/09/2018 10:00	Not in a healthcare setting	02/11/2019 00:00						
PAT01	Excluded			56	Ischemic Stroke						02/01/2019 00:00			02/01/2019 00:00	No	No				
PAT19	Excluded			56	Ischemic Stroke						02/05/2019 00:00			02/07/2019 00:00	No	No				
PAT28	Excluded			79	Ischemic Stroke	Yes	MCA		M2					02/27/2019 00:00						
PAT29	Excluded	No	Yes	50	Ischemic Stroke	Yes	ICA			7	02/25/2019 01:00	02/25/2019 04:00		02/28/2019 00:00			Yes	Allergy to contrast material	No	
wo129	Excluded													02/01/2019 00:00						

Date of report: 03/04/2019 04:51:30 GMT-05:00 run by User: JC-Stroke 1 (1jstroke) at Site: 1 JC-Stroke (38578) in Stroke PMT

Please note: GWTG aggregate comparative data is intended for internal quality improvement. Permission is required from the American Heart Association and Quintiles for external presentation or publication of benchmark data.



TJC LAYERS

ADDED: ASR-IP AND ASR-OP MEASURE GROUPS

REPORT 1

GWTG Standard Measures:	Select Measure	Select M
GWTG Enhanced Version & Special Initiative Measures:	Select Measure	
GWTG Additional Patient Population Measures:	Select Measure	
Historic Measures:	<p>Acute Stroke Ready (ASR)</p> <p>**ASR-IP Measure Set**</p> <p>ASR-IP-1</p> <p>ASR-IP-2</p> <p>ASR-IP-3</p> <p>**ASR-OP Measure Set**</p> <p>ASR-OP-1</p> <p>ASR-OP-2a</p> <p>ASR-OP-2b</p> <p>ASR-OP-2c</p> <p>ASR-OP-2d</p>	
Format:		
Compare to: (ctrl-click to select multiple)		

Add Another Report

REPORT 1

GWTG Standard Measures:	Select Measure	Select Measure
GWTG Enhanced Version & Special Initiative Measures:	Select Measure	
GWTG Additional Patient Population Measures:	Select Measure	
Historic Measures:	Select Measure	
Format:		

- Stroke Measure Logic and Rationale
- Measure Descriptions - Stroke MER
- Measure Descriptions - EMS/ML
- Measure Descriptions - MD CHIA
- Measure Descriptions - ASR
- Measure Descriptions - MSN
- Measure Descriptions - Post Hospital Care Follow-up Measures



Added ASR Measure Description Document

ADD STK-OP-1 REPORT TO STK LAYER

- Runs as a measure group (**STK_OP_1**)
- Output displays all subpopulations of STK-OP-1 as separate measures
 - STK-OP-1a
 - STK-OP-1b
 - STK-OP-1c
 - STK-OP-1d
 - STK-OP-1e
 - STK-OP-1f

REPORT 1	
GWTG Standard Measures:	Select Measure
GWTG Enhanced Version & Special Initiative Measures:	**STK_OP_1**
GWTG Additional Patient Population Measures:	Smoking Cessation - Observation Status Only Statin Prescribed at Discharge - Observation Status Only Stroke Education - Observation Status Only Weight Recommendation - Observation Status Only
Historic Measures:	TJC/CMS Outpatient Stroke
Format:	**STK_OP_1**
Compare to: (ctrl-click to select multiple)	Composite Measures GWTG/PAA Composite CDC/COV Composite Stroke Core Measure Composite Defect Free Measures GWTG/PAA Defect Free

Patient Records Report for measure STK-OP-1a

Overall Rate (Not Reported)
 Time Period: Dec 2017 - Dec 2017; Sites: 1 3C-Stroke (38578)
 Patients Included: 8; Patients Excluded: 1
 Population D: 8; Population R: 1

Show filters This report shows all records, 9 of 9

Patient ID	Included in Results?	Measure Value	Measure Population	Encounter Date	Date of Birth	Race	Hispanic Ethnicity	Gender	Payment Source - Medicare	ICD-10-CM Principal Diagnosis Code:	E/M Code	Discharge Code STK	When is the earliest physician/APN/PA documentation of comfort measures only?	Hospital Arrival Date and Time	What is the date/time the patient departed from the emergency department?
STKOP1b	Included	3615	D	12/02/2018	09/20/1935	White	No/UTD	Male	Medicare	16001	99281 - EMERGENCY DEPT VISIT	4a Acute Care Facility - General Inpatient Care	2- Day 2 or after	12/01/2018 11:45	12/05/2018 00:00
STKOP1c	Included	3615	D	12/02/2018	09/20/1935	White	No/UTD	Male	Medicare	16300	99281 - EMERGENCY DEPT VISIT	4a Acute Care Facility - General Inpatient Care	2- Day 2 or after	12/01/2018 11:45	12/05/2018 00:00
STKOP1c1	Included	3615	D	12/02/2018	09/20/1935	White	No/UTD	Male	Medicare	16300	99281 - EMERGENCY DEPT VISIT	4a Acute Care Facility - General Inpatient Care	2- Day 2 or after	12/01/2018 11:45	12/05/2018 00:00
STKOP1d	Included	3615	D	12/02/2018	09/20/1935	White	No/UTD	Male	Medicare	16300	99281 - EMERGENCY DEPT VISIT	4a Acute Care Facility - General Inpatient Care	2- Day 2 or after	12/01/2018 11:45	12/05/2018 00:00
STKOP1d1	Included	3615	D	12/02/2018	09/20/1935	White	No/UTD	Male	Medicare	16300	99281 - EMERGENCY DEPT VISIT	4a Acute Care Facility - General Inpatient Care	2- Day 2 or after	12/01/2018 11:45	12/05/2018 00:00
STKOP1e	Included	3615	D	12/02/2018	09/20/1935	White	No/UTD	Male	Medicare	16300	99281 - EMERGENCY DEPT VISIT	4a Acute Care Facility - General Inpatient Care	2- Day 2 or after	12/01/2018 11:45	12/05/2018 00:00
STKOP1f	Included	3615	D	12/02/2018	09/20/1935	White	No/UTD	Male	Medicare	16300	99281 - EMERGENCY DEPT VISIT	4a Acute Care Facility - General Inpatient Care	2- Day 2 or after	12/01/2018 11:45	12/05/2018 00:00
STKOP1f1	Included	3615	D	12/02/2018	09/20/1935	White	No/UTD	Male	Medicare	16300	99281 - EMERGENCY DEPT VISIT	4a Acute Care Facility - General Inpatient Care	2- Day 2 or after	12/01/2018 11:45	12/05/2018 00:00
TRA391	Excluded		R		09/20/1935	White	No/UTD	Male	Medicare	16001			4- Not Documented/UTD	08/31/2015 00:11	

Patient Records Report for measure STK-OP-1b

Hemorrhagic Stroke
 Time Period: Dec 2017 - Dec 2017; Sites: 1 3C-Stroke (38578)
 Patients Included: 1; Patients Excluded: 8
 Population B: 7; Population D: 1; Population R: 1

Show filters This report shows all records, 9 of 9



ADD CSTK-O1 REPORT TO STK LAYER

Configurable Measure Reports

Generate Report

Demographics Admin Clinical Codes Admission Hospitalization Advanced Stroke Care
Special Initiatives Historic

Calculate

Measure Name	Population	Status
IV Alteplase Arrive by 2 Hour, Treat by 3 Hour	Excluded	Patient is excluded from the measure based on the data provided.
Early Antithrombotics	Excluded	Patient is excluded from the measure based on the data provided.
VTE Prophylaxis	Excluded	Patient is excluded from the measure based on the data provided.
Antithrombotics	Excluded	Patient is excluded from the measure based on the data provided.
Anticoag for AFib/AFlutter	Excluded	Patient is excluded from the measure based on the data provided.
Smoking Cessation	Excluded	Patient is excluded from the measure based on the data provided.
Statin Prescribed at Discharge	Excluded	Patient is excluded from the measure based on the data provided.
Dysphagia Screen	Excluded	Patient is excluded from the measure based on the data provided.
Stroke Education	Excluded	Patient is excluded from the measure based on the data provided.
Rehabilitation Considered	Excluded	Patient is excluded from the measure based on the data provided.
Time to Intravenous Thrombolytic Therapy - 60 min	Excluded	Patient is excluded from the measure based on the data provided.
LDL Documented	Excluded	Patient is excluded from the measure based on the data provided.
Intensive Statin Therapy	Excluded	Patient is excluded from the measure based on the data provided.
IV Alteplase Arrive by 3.5 Hour, Treat by 4.5 Hour	Excluded	Patient is excluded from the measure based on the data provided.
NIHSS Reported	Excluded	Patient is excluded from the measure based on the data provided.
STK-1	R	Missing General Data Elements
STK-2	R	Missing General Data Elements
STK-3	R	Missing General Data Elements
STK-4	R	Missing General Data Elements
STK-5	R	Missing General Data Elements
STK-6	R	Missing General Data Elements
STK-8	R	Missing General Data Elements
STK-10	R	Missing General Data Elements
CSTK-01	R	Missing General Data Elements

TIME PERIOD

Interv

From

REPORT 1

GWTC Standard Measures:

GWTC Enhanced Version & Special Initiative Measures:

GWTC Additional Patient Population Measures:

Historic Measures:

Format:

Compare to: (ctrl-click to select multiple)

STK-5
STK-6
STK-8
STK-10
Stroke Team Activation
Stroke Team Arrival
ED Physician Assessment Time
Neurosurgical Services Consulted
Brain Imaging Time
Lab Tests Time
ECG Time
Chest X-ray Time
Blood Glucose Level Completed
Comprehensive Stroke Center (CSTK) CSTK-01
Inpatient Stroke
%Symptom Discovery to CT <= 25min - Inpatient
Anticoag for AFib/Aflutter - Inpatient
Antithrombotics - Inpatient
Dysphagia Screen - Inpatient
Early Antithrombotics - Inpatient
Intensive Statin Therapy - Inpatient
IV Alteplase 3 Hour - Inpatient
IV Alteplase 4.5 Hour - Inpatient
Last Known Well To Symptom Discovery - Inpatient
LDL Documented - Inpatient
NIHSS Reported - Inpatient
Patient Location When Stroke Symptoms Discovered
Rehabilitation Considered - Inpatient
Smoking Cessation - Inpatient
Northeast Region Hospitals

- Available in the “GWTC Enhanced Version & Special Initiative Measures” drop down list.
- Also added to **STK Measure Set**

OPERATIONAL UPDATES

VASCULAR IMAGING ERROR

Previous:

[-] Errors

Errors and Warnings

The following **errors** will prevent saving the form as complete:

Vascular imaging (e.g., CTA, MRA, DSA) performed:
Please enter a value for Vascular imaging (CTA, MRA) performed.
QMER15

Target lesion visualized:
Please enter a value for Target lesion identified.
QMER16

Updated:

[-] Errors

Interpretation of first brain image after symptom onset, done at any facility: Acute Hemorrhage No Acute Hemorrhage Not Available

Was Acute Vascular or perfusion imaging (e.g. CTA, MRA, DSA) performed at your hospital? Yes No

Date/Time 1st vessel or perfusion imaging initiated at your hospital:
MM/DD/YYYY HH:MI

If yes, type of imaging (select all that apply):

- CTA
- CT Perfusion
- MRA
- MR Perfusion
- DSA (catheter angiography)
- Image type not documented

Was a target lesion (large vessel occlusion) visualized? Yes No/ND

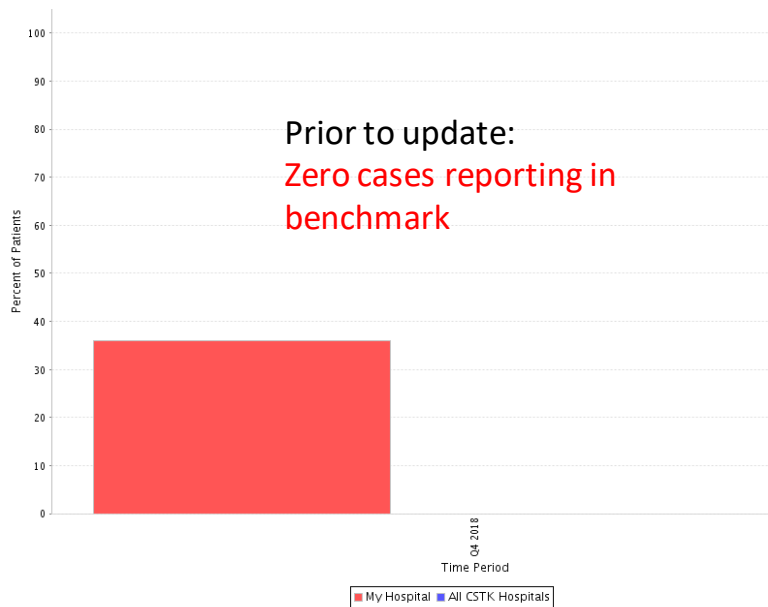
If yes, select site of large vessel occlusion (select all that apply):

- ICA

FIXED - "ALL CSTK HOSPITALS" BENCHMARK ERROR

CSTK-10

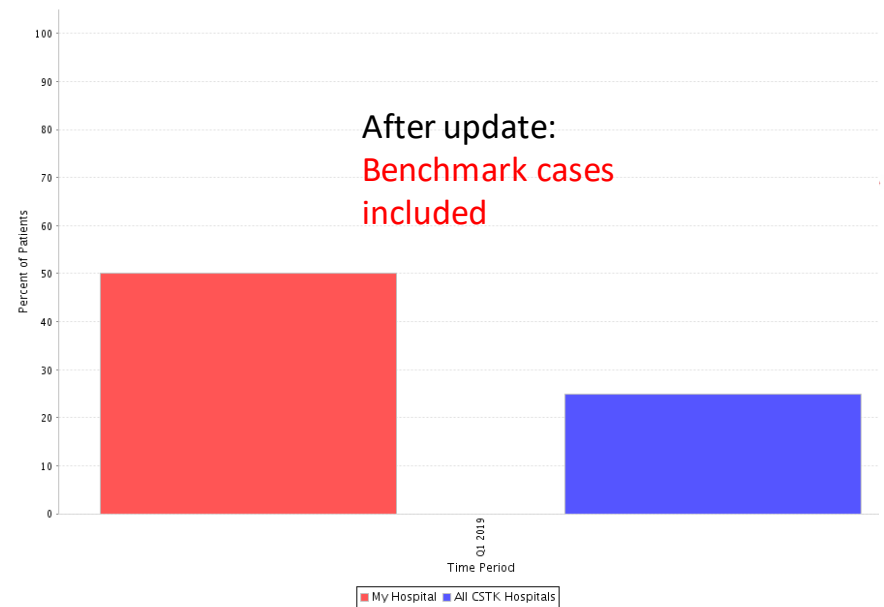
Modified Rankin Score (mRS) at 90 Days: Favorable Outcome
Time Period: Q4 2018 - Q4 2018; Site: [REDACTED]



CSTK-10				
Benchmark Group	Time Period	Numerator	Denominator	% of Patients
My Hospital	Q4 2018	18	50	36.0%
All CSTK Hospitals	Q4 2018	0	0	

CSTK-10

Modified Rankin Score (mRS) at 90 Days: Favorable Outcome
Time Period: Q1 2019 - Q1 2019; Site: [REDACTED]



CSTK-10				
Benchmark Group	Time Period	Numerator	Denominator	% of Patients
My Hospital	Q1 2019	1	2	50.0%
All CSTK Hospitals	Q1 2019	44	177	24.9%

NEW FILTER OPTIONS

Time From Discovery of Stroke Symptoms to Time Last Known Well	0-5 min Discovery 6-10 min Discovery 11-15 min Discovery 16-20 min Discovery 21-25 min Discovery 26-30 min Discovery 31-35 min Discovery 36-40 min Discovery 41-45 min Discovery 46-50 min Discovery 51-55 min Discovery 56-60 min Discovery >60 min Discovery Missing and Invalid times	<input type="checkbox"/> Compare selections
IV tPA by MSU	Yes No	<input type="checkbox"/> Compare selections
IV alteplase at an outside hospital	Yes No	<input type="checkbox"/> Compare selections

ADDITIONAL ITEMS

- UPDATE USER INACTIVITY TIMEOUT TO 15 MINUTES FOR PMT (ALL)
- UPDATED – CHANGED “TPA” TO “ALTEPLASE IN ALL TJC AND GWTG MEASURES
- REPAIRED – DISPLAY OPTION, ACHIEVEMENT GOAL MISSING FOR ACHIEVEMENT MEASURE “STATIN PRESCRIBED AT DISCHARGE”
- REPAIRED – PRE-DEFINED CONSENSUS MEASURE ERROR REPORTED BY USERS

QUESTIONS