STROKE: EARLY RECOGNITION, TIMELY TREATMENT

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DISCLOSURES

• AHA does not endorse the opinions expressed in this presentation.

SPECIAL THANKS

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STROKE RECOGNITION & SEVERITY TOOLS

What's the difference?

- Recognition tools taught to the public so they know when to call 911
 - CPSS
 - FAST
 - BEFAST
- Severity tools assign a numerical value to assessment findings
 - FAST-ED
 - NIHSS
 - MENDS
 - CPSS

PROS & CONS

• CPSS

• Pro's

- Most common
- Most familiar tool
- Con's
 - Identifies only anterior strokes
 - Misses posterior strokes

• FAST-ED

• Pro's

- Identifies both anterior and posterior strokes
- Identifies large vessel occlusions
- Supported by ND Stroke Task Force
- Con's
 - Less familiar tool

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STROKE RECOGNITION TOOL

BEFAST to stop stroke in its tracks

If you think someone is having a stroke, BE FAST and do these simple tests:



Terrible Headache

are dying.

FAST-ED: Field Assessment Stroke Triage for Emergency Destination

- Designed to help EMS providers predict large vessel occlusion strokes in the prehospital setting
 - Scoring matrix is relatively easy
 - High sensitivity, High specificity in identification of LVO
 - Correlates to NIHSS, used in hospital setting (0-42)

WHY A SEVERITY TOOL?

FAST-ED: Field Assessment Stroke Triage for Emergency Destination

- Facial Palsy Picks up on right and left hemisphere strokes
- Arm Weakness Picks up on right and left hemisphere strokes
- Speech Changes Picks up on left hemisphere strokes
- Time
- Eye Deviation Picks up on right and left hemisphere strokes
- Denial and Neglect Picks up on right sided strokes



FAST-ED

Facial Palsy – "Smile, show me your teeth"

O = If upper and lower facial features are symmetrical, they score a zero

□ 1 = If one side of the face droops or is clearly asymmetric



FAST-ED

Arm Weakness – "Hold your arms out, palms up, for 10 seconds"

0 = If both arms remain elevated for 10 seconds or slowly drift down equally

I = If the patient can raise both arms but one arm drifts down in less than 10 seconds, score a 1.

2 = If one or both arms fall rapidly, cannot be lifted or no movement occurs at all





Speech Changes Say "It is snowing in Fargo" (or some phrase) To assess for slurred speech

Expressive "Name (3 things)"

0 = Understandable speech & correctly names 2-3 items
 1 = Names 0-1 items

Receptive "Show me 2 fingers" (a simple command)
0 = Follows commands
1 = Unable to follow command



Times

Last Known Normal

Symptom Discovery

FAST-ED

Eye Deviation



 \Box 0 = If your patient responds normally, with no deviation, their eyes moving to both sides equally

□ 1 = If your patient shows a gaze preference and a clear difficulty when looking to one side, either left or right

 \Box 2 = If the patient shows forced deviation, their eyes are deviated to one side and do not move to the other side, and cannot follow examiner's finger

FAST-ED

Denial/Neglect

Do not perform – if patient has expressive or receptive aphasia

Denial - "Do you feel weakness in this arm?"

0 = If patient recognizes weakness in their weak arm
 1 = if patient does NOT recognize weakness in their weak arm

Neglect - "Who's arm is this?"

0 = If the patient recognizes their arm
 1 = if the patient does NOT recognize their arm



Normal view



Neglect and Anosognosia

□ Total – 1 = Extinct to bilateral simulation in only one sensory modality

□ Total – 2 = Does not recognize own hand or orientation only to one side of the body



WHAT DOES THE SCORE MEAN?

- The FAST-ED scale has the advantage of providing 3 distinct groups for the likelihood of Large Vessel Occlusion Stroke (LVOS)
 - 0 1 score: 15% chance of LVOS
 - 2 3 score: 30% chance of LVOS
 - >4 score: 60% or higher chance of LVOS

WHY DOES IT MATTER IF IT IS AN LVO?

- When a stroke is in a large vessel a larger area of the brain is not receiving blood flow:
 - Strokes are more severe
 - Increased risk of disability
 - 3/5 of dependency
 - Increased risk of death
 - 9/10 of mortality
- Treatment may differ:
 - Alteplase is effective in only ~10% of LVO strokes
 - Thrombectomy can be very effective

COMMUNICATING YOUR ASSESSMENT

- Communicate neuro assessment using
 - BEFAST acronym
 - FAST-ED
- Relay information from anyone who witnessed or found the patient
 - Time: Last known normal
 - **Time**: Found / Onset of symptoms
- Patient history
 - Medications on Especially blood thinners!
 - Co-morbidities Diabetes, Resp, Cancer, Cardiac,...
- Get family contact information...

STROKE SCREENING TOOLS:

BE FAST and FAST-ED

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Is this patient on blood thinners? Yes No Incident Date:							

STROKE SCREENING TOOLS: BE FAST and FAST-ED START HERE Is the patient having a stroke? Balance Perform bilateral index finger-to-nose test and bilateral heel-to-shin test в Does the patient have sudden loss of balance or coordination, trouble walking or dizziness? Eves Assess 4 quadrants of visual field by having patient locate your index finge Е Does the patient have trouble seeing out of one or both eves or sudden · Any other anticoagulants? (please list): double vision? acial Palsy (ask the patient to show their teeth or smile) Score Ask the patient to smile or show their teeth. E. E Both sides of the face move equally or not at all Does the patient's face look uneven, have sudden drooping or numbness on one side? One side of the face droops or is clearly asymmetric Arm Weakness (with eyes closed, ask patient to hold arms out with Arms their palms up and hold them there for 10 seconds) Score: Ask the patient to raise and extend both arms with their palms up. Both arms remain up for > seconds or slowly move down equally Does one arm drift downward? Α Α Patient can raise arms but one arm drifts down in < 10 seconds Does the patient have sudden numbress or weakness of the arm on one One or both arms fall rapidly, can't be lifted, or no move side of the body? at all Speech Changes Expressive Aphasia - ask the patient to name 3 common items Score: Speech Names 2 to 3 items correctly S s Ask the patient to say, "You can't teach an old dog new tricks". Names 0 to 1 item correctly Does the patient have slurred speech, trouble speaking, understanding or eceptive Aphasia - ask the patient to perform a simple command (Example: "show me two fingers") • Normal - patient can follow the simple command seem confused? 0 Unable to follow the simple command Time What time did the symptoms start? What time did the symptoms start? • т What time was the patient last known well (last appear normal)? What time was the patient last known well (last appear normal)? Glucose level = Eve Deviation Score No deviation; eyes move equally to both sides E If these criteria are met, the patient qualifies for a stroke alert: Patient has clear difficulty when looking to one side (left or right) Eyes are deviated to one side and do not move to the other side Glucose is over 80 mg/dl; and Denial/Neglect Last known well time is under 4.5 hours Denial - show the patient their affected arm and ask, "Do you feel BEFORE you request a stroke alert, obtain a FAST-ED score to see if weakness in this arm?" Score: the patient is having symptoms indicative of a large-vessel occlusion. Patient recognizes the weakness in their weak arm D If glucose is < 80, treat and then reassess BE FAST Patient does NOT recognize the weakness in their weak arm Veglect - show the patient their affected arm and ask, "Whose arm is hic?" If last known well is > 4.5 hours, obtain a FAST-ED score to see if they qualify for other treatment Patient recognizes their weak arm Patient does NOT recognize their weak arm TOTAL FAST-ED SCORE Remember: Minimize scene time as must as possible. When to call a STROKE ALERT: Severe headache with no known cause may be a sign of a hemorrhagic If any symptoms from BE FAST and within 4.5 hours = call a stroke alert regardless of FAST-ED score stroke. Continue your assessment but be sure to report the headache to the If FAST-ED score of 1 - 3 and within 4.5 hours = call a stroke alert receiving hospital. If FAST-ED score ≥ 4 and within 24 hours = call stroke alert and discuss with stroke- It is important to rule out seizure activity with the onset of symptoms. ready hospital if the patient should be taken to a thrombectomy capable stroke center If symptoms on BE FAST or FAST-ED score of 1 - 3 and outside of 4.5 hours = discuss with receiving facility If score ≥ 4 and outside of 24 hours = Discuss with receiving facility IMPORTANT PATIENT DEMOGRAPHICS Patient Name: Patient DOB Emergency Contact Phone: mergency Contact Name: Medical History Allergies

Incident Date:

Medications

Is this patient on blood thinners? Yes No

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ANY POSITIVE BE FAST FINDINGS?

Are their symptoms indicative of a large vessel stroke?

- Coumadin/Warfarin Xarelto/Rivaroxaban •
- Pradaxa/Dabigatran Savaysa/Edoxaban •
 - Eliquis/Apixaban Heparin/Enoxaparin
- Time anticoagulant last taken:

· Any other anticoagulants? (please list):

=	 Facial Palsy (ask the patient to show their teeth or smile) Both sides of the face move equally or not at all One side of the face droops or is clearly asymmetric 	Score: 0 1
1	 Arm Weakness (with eyes closed, ask patient to hold arms out with their palms up and hold them there for 10 seconds) Both arms remain up for > seconds or slowly move down equally Patient can raise arms but one arm drifts down in < 10 seconds One or both arms fall rapidly, can't be lifted, or no movement occurs at all 	Score: 0 1 2
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ANY POSITIVE BE FAST FINDINGS?

Savavsa/Edovahu

STROKE SCREENING	IG TOOLS:		
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Glucose level = If these criteria are met, the patient qualifies for a stroke alert: 0 0 1 Data for the colspan="2">Colspan="2">Barbon 2 BEFORE you request a stroke alert, obtain a FAST-ED score to see if the patient is having symptoms indicative of a large-vessel occlusion. 0 If glucose is < 80, treat druct merasses BE FAST	Visition deviator: eyes move equally to both sides liert has clear affliculty when looking to one side (intr- se deviated to one side and do not move to show the patient the show the show the show the sho		
Remember: Minimize scene time as must as possible.	10 call a STROKE ALERT:	IMPORTANT PATIENT DEMOGRAPH	ICS
 Severe headache with no known cause may be a sign of a hemorrhagic stroke. Continue your assessment but be sure to report the headache to the receiving hospital. 	In from DE FAST and within 4.5 hours = call a stroke alert regardless score score of 1 - 3 and within 4.5 hours = call a stroke alert	Datiant Name	Patient DOR:
It is important to rule out seizure activity with the onset of symptoms. If it is important to rule out seizure activity with the onset of symptoms. If it is important to rule out seizure activity with the onset of symptoms.	score 2 4 and within 24 hours = call stroke alert and discuss with stroke- il if the patient should be taken to a thrombectomy capable stroke center. I on BE FAST or FAST-ED score of 1 - 3 and outside of 4.5 hours = receiving facility	Emergency Contact Name:	Emergency Contact Phone:
• If score 24 and IMPORTANT PATIENT DEMOGRA	and outside of 24 hours = Discuss with receiving facility RAPHICS	Aedical History:	
Patient Name:	Patient DOB: Patien	Allergies:	
Emergency Contact Name: Medical History:	Emergency Contact Phone:		
Allergies:		e this nations and history?	Incident Data:
Is this patient on blood thinners? Yes No	Incident Date:		Incident Date:

ND STROKE SYSTEM PROTOCOL



ND STROKE TRIAGE AND TRANSFER GUIDELINE

Patient experiencing one or more of the following stroke signs and symptoms:

- Balance- Sudden trouble walking, dizziness, loss of balance or coordination. Perform bilateral index finger to nose test and bilateral heel to shin test.
- Eyes- Sudden double vision or trouble seeing out of one or both eyes. Assess 4 quadrants of visual field.
- · Face- Sudden drooping or numbness on one side of the face. Ask the person to smile or show teeth.
- Arm- Sudden numbress or weakness of the arm, especially on one side of the body. Ask the person to close eyes, raise and extend both arms with palms up. Does one arm drift downward?
- Speech- Sudden confusion, trouble speaking or understanding. Have patient a repeat phrase such as "You can't teach an old dog new tricks".
- · Time to dispatch transport- Consider timeliness of ground vs. air options
- Sudden severe headache with no known cause.

Contact nearest tertiary hospital to consult with neurologist regarding appropriate transfer destination. In most cases patient will be transferred to closest stroke ready hospital.

PATIENT SHOULD BE TRANSPORTED AS SOON AS EMS UNIT IS AVAILABLE Door-in to Door-out Goal <30 minutes

- Obtain vital signs stat and every 15 minutes
- 2. Monitor pulse oximetry and administer oxygen as needed to maintain a SpO2 of >94%; starting at 2L/min per nasal cannula. Oxygen is not recommended if patient able to maintain SpO2 >94% on room air.
- 3. Assess bedside glucose. Treat if <60.
- 4. Perform neuro assessment and FAST ED scoring if able (consider utilizing FAST ED app)
- 5. Establish last known well (LKW)- the time when the patient was last known to be neurologically normal. If the patient was sleeping and wakes up with symptoms, time last known well is the last time the patient was seen to be normal (i.e. before bed).
- 6. Keep NPO (including ice chips and meds)
- Keep HOB elevated at 30 degrees
- 8. Insert 1-2 large bore IV sites if able (AC preferred). Maintain IV patency with 0.9% Normal Saline at TKO.
- 9. Acquire medical history. Determine if patient takes anticoagulants or has previous history of stroke.
- 10. Obtain weight in kg if able.
- 11. If time allows, complete Thrombolytic Alteplase (tPA) Therapy Guidelines checklist to determine IV alteplase eligibility.

Report the following to accepting provider or nurse:

- Symptom onset/Last Known Well **Results of neuro assessment** Vital Signs
- Weight in kg if available
- Blood glucose results (send with patient or fax)
- Contact information for family

- Medical History
- Anticoagulant status

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- 6. Keep NPO (including ice chips and meds)
- 7. Keep HOB elevated at 30 degrees

Vital Sign

- 8. Insert 1-2 large bore IV sites if able (AC preferred). Maintain IV patency with 0.9% Normal Saline at TKO.
- Acquire medical history. Determine if patient takes anticoagulants or has previous history of stroke.
 Obtain weight in kg if able.
- If time allows, complete Thrombolytic Alteplase (tPA) Therapy Guidelines checklist to determine IV alteplase eligibility.

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Medical History

coagulant status

Contact information for family
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NORTH

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Vital Signs	Medical History						
Anticoagulant status	 Contact information for family 						



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- Contact information for family

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LEVELS OF STROKE CARE

Comprehensive Stroke Center

All TSC functions plus Neurosurgeon, Neuroendovascular, and full spectrum of hemorrhagic stroke care

Thrombectomy-Capable Stroke Center

All PSC functions plus Neurointerventionalist to perform thrombectomy

Primary Stroke Center

Stroke Unit, coordinator, Stroke Service, continuum of in-patient care

Acute Stroke Ready Hospital

IV tPA, CT scanner, acute stroke expertise (via TeleStroke if needed)

Basic Care Hospital

Assessment, identification, stabilization & transfer

ND STROKE SYSTEM



WHY?

We can correlate their symptoms to their anatomy & different stroke syndromes

STROKE SCREENING TOOLS: BE FAST and FAST-ED						
START HERE J Is the patient having a stroke?	\checkmark	Check if yes		AN	Y POSITIVE BE FAST FINDINGS?	Score
Balance Perform bilateral index finger-to-nose test and bilateral heel-to-shin test Does the patient have sudden loss of balance or coordination, mubile walking nr dr interes?		в		Ace Ask i	their symptoms indicative of a large vessel stroke?	(Circle)
watering of industriesser Eyee Seven Assess 4 quadrants of visual field by having patient locate your index finger. Does the patient have trouble seeing out of one or both types or sudden double vision.		Е		• C • P • E • A	comadin/Warfatrin Xareho/Rivarosaban Takawa/Dalojakan/Saxwahan Iiquis/Apixaban Heparin/Enoxaparin Tiane antiocagu Iiquis/Apixaban Heparin/Enoxaparin Tiane antiocagu Iiast taken:	slamt
Face Ask the patient to smile or show their teeth. Does the patient's face look uneven, have sudden drooping or numbress on one side?		F		F	Facial Palsy (ask the patient to show their teeth or smile) Both sides of the face move equally or not at all One side of the face droops or is clearly asymmetric 	Score: 0 1
Arms Arms Ask the patient to raise and extend both arms with their palms up. Does one arm diff downward? Does the patient have sudden numbress or weakness of the arm on one side of the body?		А		A	Arm Weakness (with eyes closed, ask patient to hold arms out with their pains up and hold them there for 10 second). Both arms remain up for 3-seconds or slowly move down equally • Patient can raise arms but one arm drits down in <10 seconds • One or both arms fail rapidy, can't be lifted, or no movement occurs at all	Score: 0 1 2
Speech A dat the patient to say, "You can't teach an old stop new solks". Does the patient have sturned speech, trouble speaking, understanding or seem contused?		s		s	Speech Changes Expressive Aphasian - wilk the patient to name 3 common items Expressive Aphasian concept Proceptive Aphasian - ability for a simple command Receptive Aphasian - ability for a simple command (Changles' Tabue mole for figures) • Normal - patientic care follow the simple command U tradies follow the simple command	Score: 0 1 0 1
What time did the symptoms start? What time did the symptoms start? What time was the patient last known well (last appear normal)?	-	т		т	Time What time did the symptoms start? What time was the patient last known well (last appear normal)?	
Glucose level = If these criteria are met, the patient qualifies for a stroke alert: • Patient received one or more check marks (); and		E	Eye Deviation Not deviation: eyes move equally to both sides Nation: A subset factor of the side and do not move to the other side Eyes are deviated to one side and do not move to the other side	Score: 0 1 2		
 Cuccose is over or originar and Last known will time is under 4.5 hours BBFORE you request a stroke alert, obtain a FAST-ED score to 1 the patient is having symptoms indicative of a large-vessel occlur II glacose is < 80, reat and then reassess BE FAST II last known well is < 4.5 hours, obtain a FAST-ED score to see if they quality for other treatment 	o see if Jusion.			D	Devail/sepicet Denni- show the pasters their affectsid arm and ask, "Do you leel weakness in this arm?" • Pattern teorgospices the weakness in their weak arm • Pattern teorgospices the weakness me and ask, "Whose arm is begind: - show the pattern their affected arm and ask," • Pattern teore show Teorogaize their weak arm • Pattern teore Show Teorogaize their weak arm	Score: 0 1 0 1
			,	то	TAL FAST-ED SCORE	\frown
Remember: Memines core me as must as possible. Servere headarbe with no isoan cause may be a sign of a henoring is servering hospital. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the orset of symptoms. It is important to rule out sectore activity with the ors						
IMPORTAL	NT	ΡΑΤΙ	ENT	T DE	MOGRAPHICS	
Patient Name:					Patient DOB:	
Emergency Contact Name:					Emergency Contact Phone:	
Medical History:						
Allergies:						
Medications:						





LIFE AFTER STROKE



BRAIN ANATOMY

- Cerebrum
 - Frontal, Temporal, Parietal & Occipital lobes
 - Right & Left Hemispheres
- Cerebellum
- Brain Stem
- Cerebral Vessels
 - Anterior
 - Right & Left Hemispheres
 - Supplied by carotid arteries
 - Posterior
 - Cerebellum, Occipital lobe
 - Supplied by vertebral arteries





STROKE SYNDROMES

- Anterior
 - Right hemisphere
 - Left hemisphere
- Posterior

TIA

- Cerebellar
- Brain stem
- Hemorrhagic
 - 13% of all strokes
 - Higher mortality than ischemic



LEFT HEMISPHERE STROKE

- Most common of all strokes
- Right sided weakness & visual field deficit
- Expressive & receptive aphasia
- Left gaze deviation









leftward gaze





RIGHT HEMISPHERE STROKE

- Most common of all strokes
- Left sided weakness & visual field deficit
- Left sided neglect, denial
- Right gaze deviation











Normal view

Neglect and Anosognosia





CEREBELLAR STROKE

- Balance issues
- Same sided limb ataxia (discoordination)
- Truncal or gait ataxia (wide base gait)



BRAINSTEM STROKE

- Quadraparesis or hemiparesis
- Sensory loss in all 4 limbs or hemi sensory loss
- Crossed signs (ex. Right face and left body)
- Decreased consciousness, nausea, vomiting, hiccups, abnormal respirations
- Oropharyngeal weakness
- Vertigo, tinnitus
- Eye movement abnormalities double vision, dysconjugate gaze, gaze deviation



HEMORRHAGIC STROKE

- Headache, N & V, Decreased consciousness
- ICH similar to ischemic, symptoms can be progressive
- SAH "Worse headache of my life", intolerance to light, neck stiffness/pain





- 76 yo female lives alone in senior housing
- She talks to her son on the phone at 1000 and he has trouble understanding what she is saying
- He calls Betty's neighbor to check on her
- Betty is found slumped in her chair, seems weak and somewhat drowsy

BETTY'S ASSESSMENT

- Drowsy, does alert with stimulation
- Speech is off mumbling, very slurred
- Understanding most things / commands
- Seems generally weak, right side is moving less
- Facial weakness on left
- Eye deviation noted to left, but able to cross mid-line with encouragement

••••••••••••••••••••••••••••••••••••••	if yes
Balance Perform bilateral index finger-to-nose test and bilateral heel-to-shin test Does the patient have sudden loss of balance or coordination, trouble walking or dizziness?	в
 Eyes Assess 4 quadrants of visual field by having patient locate your index finger. Does the patient have trouble seeing out of one or both eyes or sudden double vision? 	Е
 Face Ask the patient to smile or show their teeth. Does the patient's face look uneven, have sudden drooping or numbress on one side? 	F
 Arms Ask the patient to raise and extend both arms with their palms up. Does one arm drift downward? Does the patient have sudden numbness or weakness of the arm on one side of the body? 	А
 Speech Ask the patient to say, "You can't teach an old dog new tricks". Does the patient have slurred speech, trouble speaking, understanding or seem confused? 	S
What time did the symptoms start? What time was the patient last known well (last appear normal)?	т
Glucose level =	
If these criteria are met, the patient qualifies for a stroke alert: Patient received one or more check marks (√); and Glucose is over 80 mg/dl; and Last known well time is under 4.5 hours 	
BEFORE you request a stroke alert, obtain a FAST-ED score to see if the patient is having symptoms indicative of a large-vessel occlusion. • If glucose is < 80, treat and then reassess BE FAST	_

 If last known well is > 4.5 hours, obtain a FAST-ED score to see if they qualify for other treatment

BETTY'S ASSESSMENT

- Drowsy, does alert with stimulation
- Speech is off mumbling, very slurred
- Understanding most things / commands
- Seems generally weak, right side is moving less
- Facial weakness on left
- Eye deviation noted to left, but able to cross mid-line with encouragement

Test Item	Score
F- Facial Droop/Palsy	1
A – Arm Motor Function	1
S – Speech Expressive/Receptive	0
T – Time	0
E – Eye Deviation	0
D – Denial/Neglect Doesn't recognize	0
weakness in arm Doesn't recognize weak arm	(don't test if aphasic)
TOTAL	2

BETTY

- What is symptom onset?
- What is her last known well?
 - Determined LKW was 1900
- Outside window for alteplase
- FAST-ED =2, not likely LVO
- Where should Betty be taken?

WAYNE

- 78 yo male
- Went to hospital in the afternoon for stroke symptoms, which resolved (TIA), and he returned home
- Went to bed at 2000, Gets up and falls at 0200
- Wife called 911, taken to hospital with similar symptoms as his TIA 12 hours prior

Test Item	Score
F- Facial Droop/Palsy	1
A – Arm Motor Function	2
S – Speech Expressive/Receptive	
T – Time	
E – Eye Deviation	
D – Denial/Neglect Doesn't recognize weakness in arm Doesn't recognize weak arm	
TOTAL	

WAYNE'S FAST-ED

- Facial Palsy "Smile, show me your teeth"
 - 0 = If upper and lower facial features are symmetrical, they score a zero
 - □ 1 = If one side of the face droops or is clearly asymmetric
- Arm Weakness "Hold your arms out, palms up, for 10 seconds"
 - 0 = If both arms remain elevated for 10 seconds or slowly drift down equally
 - I = If the patient can raise both arms but one arm drifts down in less than 10 seconds, score a 1.
 - 2 = If one or both arms fall rapidly, cannot be lifted or no movement occurs at all

Test Item	Score	
F- Facial Droop/Palsy	1	
A – Arm Motor Function	2	
S – Speech Expressive/Receptive	0	
T – Time	0	
E – Eye Deviation		
D – Denial/Neglect Doesn't recognize weakness in arm Doesn't recognize weak arm		
TOTAL		

WAYNE'S FAST-ED

Speech Changes Say "You can't teach an old dog new tricks" (or some phrase) To assess for slurred speech

Expressive "Name (3 things)"

0 = Understandable speech & correctly names 2-3 items
 1 = Names 0-1 items

Receptive "Make a fist" or "Show me 2 fingers" (a simple command) 0 = Follows commands 1 = Unable to follow command

Times Last Known Normal Symptom Discovery

Test Item	Score	WAYNE'S FAST-ED	
F- Facial Droop/Palsy	1	NIHSS : Best Gaze	
A – Arm Motor Function	2		
S – Speech Expressive/Receptive	0		
T – Time	0	Eye Deviation 0: Full gaze 1: Do not cross midline 2: Forced gaze deviation D O = If y (a) ur participations and a participation	
E – Eye Deviation	1	 0 = If your patient responds normally, with no deviation, their eyes moving to both sides equally 1 = If your patient shows a gaze preference and a clear difficulty when looking to one side, either left or right 2 = If the patient shows forced deviation, their eyes are deviated to one side and do not move to the other side, and cannot follow examiner's finger 	
D – Denial/Neglect Doesn't recognize weakness in arm Doesn't recognize weak arm	(don't test if aphasic)		
TOTAL			

Test Item	Score
F- Facial Droop/Palsy	1
A – Arm Motor Function	2
S – Speech Expressive/Receptive	0
T – Time	0
E – Eye Deviation	1
D – Denial/Neglect Doesn't recognize weakness in arm Doesn't recognize weak arm	2 (don't test if aphasic)
TOTAL	6

WAYNE'S FAST-ED

Denial/Neglect

<u>Do not perform</u> – if patient has expressive or receptive aphasia

Denial - "Do you feel weakness in this arm?"

O = If patient recognizes weakness in their weak arm

1 = if patient does NOT recognize weakness in their weak arm

Neglect - "Who's arm is this?"

0 = If the patient recognizes their arm
 1 = if the patient does NOT recognize their arm

WAYNE

- Alteplase not administered as he was outside window
- MRI positive for stroke and patient having significant symptoms
- Post-thrombectomy he is doing better
 - 12 hours later his FAST-ED =3
 - In rehab a couple days later FAST-ED =1



TIME IS BRAIN

• In stroke, brain cells die thereby aging one's brain!

Ja Ma	Brain Cells Lost	Number of Years the Brain Ages
Per Stroke	1.2 billion	36 yrs
Per Hour	120 million	3.6 yrs
Per Minute	1.9 million	3.1 weeks
Per Second	32,000	8.7 hrs

https://bpac.org.nz/BPJ/2010/March/stroke1.aspx

TIME IS BRAIN

So thanks for



with our stroke patients!