

SCRIPT

SUDDEN DIFFICULTY MOVING HER
RIGHT ARM



SCENARIO

#1366

NAME

EVELYN ADAMS

SPECIALTY

Neurology

DIFFICULTY LEVEL

ADVANCED

SIMULATION ENVIRONMENT

INTRA HOSPITAL - EMERGENCY ROOM

BODY INTERACT™
VIRTUAL PATIENTS

This patient is not a real patient, and the clinical scenario, while clinically plausible, is fictional.

Scenario

General description of the scenario info. Corresponds to the initial information presented to the trainee when selecting this scenario.

Title

Sudden difficulty moving her right arm

Context

Mrs. Adams was at home with her son preparing dinner when she suddenly had difficulty moving her right arm. Her son also noticed that her face was asymmetrical and she was struggling to speak.

Briefing

72-year-old female experienced sudden speech impairment and right-sided weakness three hours ago. The patient was brought to the hospital by her son. No ambulance services were involved.

General learning objectives

In this scenario, the learner should:
Recognize acute stroke.

Specific learning objectives

Important when questioning the patient and family:

Identify the primary symptoms, time onset

Inquire about any previous similar episodes, existing comorbidities, regular medications, and smoking habits

Fundamental in ABCDE:

Perform airway observation

Perform O2 saturation, respiratory rate, blood pressure, heart rate, blood glucose and Glasgow coma scale

Performance of neurological assessments (NIHSS)

Diagnostic exams you should order according with medical indication:

Cerebral CT angiogram

Head CT

About the treatment:

Perform 2 IV catheterization

Call for specialty review - Neurology, and follow indications

For further discussion:

Knowledge of contraindications to alteplase

Pre-simulation notes

-

Environment

Emergency Room

Specialty

Neurology

Difficulty Level

Advanced

Reviewers

Angels Initiative

Patient characteristics

Characterization of the patient's demographic, habits, behavior and specific status effects.

Avatar



Patient Name

Evelyn Adams

Age

72 years

Race/Ethnicity

European/Caucasian

Smoker

No

Sedated

No

Agitated

No

Facial palsy

100

Renal metabolic compensation

Auto

Gender

Female

Eye color

Blue

Conscious

Yes

Confused

Yes

Last meal over 2h

Yes

Speech impairment

Yes

Patient parameters

These parameter values are used by the simulator to initialize this scenario.

Systolic arterial blood pressure (mmHg)

215

Heart rate (bpm)

130

Respiratory rate (/min)

32

Temperature (°C)

36.3

Urinary output (mL/kg/h)

0.6

Height (cm)

167

Potassium (mEq/L)

4.1

Diastolic arterial blood pressure (mmHg)

110

O2 saturation (%)

88

Blood glucose (mg/dL)

112

Hemoglobin (g/dL)

14.9

Weight (kg)

80

BMI

28.7

Sodium (mEq/L)

139

Other character

Characterization of the other character included in the scenario can be healthcare professional, relative, friend or other.

Non-Player Character

Relative: Patient's son

Physical examination

The items below characterize the patient's physical examination and monitoring findings on admission.

Airway

Airway observation

1st Priority

Airway is open, not obstructed and safe. No upper airway abnormal noises.

Breathing

Chest palpation

Not a priority

Normal: 2L - normal; 2R - normal

Chest percussion

Not a priority

Right: 1R- resonance; 2R- resonance; 3R- resonance; 4R- resonance; 5R- dullness.
Left: 1L- resonance; 2L- resonance; 3L- superficial cardiac dullness; 4L- superficial cardiac dullness; 5L- resonance.

O2 Sat (%)	1st Priority	88
Pulmonary auscultation	2nd Priority	Clear to auscultation, with normal vesicular murmurs in all sites.
Respiratory rate (/min)	1st Priority	32
Circulation		
Blood pressure (mmHg)	1st Priority	215/110
Capillary refill time (s)	Not a priority	1
Cardiac auscultation	2nd Priority	Regular rate and rhythm, normal S1 and S2 sounds, no murmurs, gallops or rubs.
Heart rate (bpm)	1st Priority	130
Pulse palpation	2nd Priority	Central - Amplitude: strong; Rhythmic. Peripheral - Amplitude: strong; Rhythmic.
Urinary output (mL/kg/h)	2nd Priority	0.6
Disability		
Blood glucose (mg/dL)	1st Priority	112
Glasgow Coma Scale	1st Priority	12 - Moderate impairment of consciousness (E4-V3-M5).
Pupil light reflex	Not a priority	Right: Size - 4 mm; Right eye light: 2 mm; Left eye light: 2 mm. Left: Size - 4 mm; Right eye light: 2 mm; Left eye light: 2 mm.
Exposure		
Abdominal palpation	Not a priority	No rigidity. No pain. No guarding or signs of peritoneal irritation. No masses or palpable organomegalies.
Temperature (°C)	2nd Priority	36.3

Dialogues

This is a complete list of all the possible dialogue lines by both the health practitioner (on the left) and the respective responses from the patient (on the right).

History Taking

Chief Complaint

01. How are you feeling?

1st Priority

Patient: Boo... streen...

02. Can you tell me what happened to her?

1st Priority

Patient's son: We were making dinner when she felt a headache and started to feel weak.

History of Present Illness

03. When was the last time she had something to eat?

Not a priority

Patient's son: Maybe three or four hours ago.

04. Did she mention any other symptoms?

1st Priority

Patient's son: She tried to speak, but her voice became slurred and I couldn't understand her.

05. How long has it been since the symptoms started?

1st Priority

Patient's son: Maybe 2 or 3 hours ago.

Past Medical/Surgical History

06. Does she have any chronic illness?

1st Priority

Patient's son: Yes, she has hypertension.

Medications and Allergies

07. Does she take any medication?

1st Priority

Patient's son: Yes, she takes medication for hypertension. I don't know the name.

08. Does she take any anticoagulants orally?

Patient's son: No.

09. Does she have any allergies?

1st Priority

Patient's son: No.

1st Priority

Social history

10. How active is she?

Not a priority

Patient's son: She goes for a walk twice a week.

Diagnostic strategies

The items below characterize the possible test results during this scenario, including rules that may condition test results.

Decision aids

FAST scale

1st Priority

Facial droop - One side of face does not move at all
Arm drift - One arm drifts compared to the other
Speech - Slurred or inappropriate words or mute

Stroke scale (NIHSS)

1st Priority

- On admission, untreated stroke: 13 - Moderate stroke
- Treatments administered Alteplase - 8
- Treatments - Thrombectomy/Thrombectomy by interv. neuroradiology - 3
- Existing Severe intracranial hemorrhage - 25

Electrophysiology

12-Lead ECG

2nd Priority

Sinus tachycardia.

Imaging

Cerebral angiography

1st Priority

Occlusion of M1 segment of left MCA.

Cerebral perfusion CT

2nd Priority

Mismatch in the area of left parietal temporal lobe.

Head CT

1st Priority

Spontaneous hyperdensity in the M1

segment of the left middle cerebral artery. This information needs to be integrated clinically but it is likely related to an acute thrombus. There are no visible acute parenchymal lesions. The cerebral cisterns and ventricles are of normal volume. Small hypodensities present in left internal capsule and subcortical white matter bilaterally in presumed relation to chronic lesions of small vessel disease. There are no signs of bone fractures. ASPECTS: 10

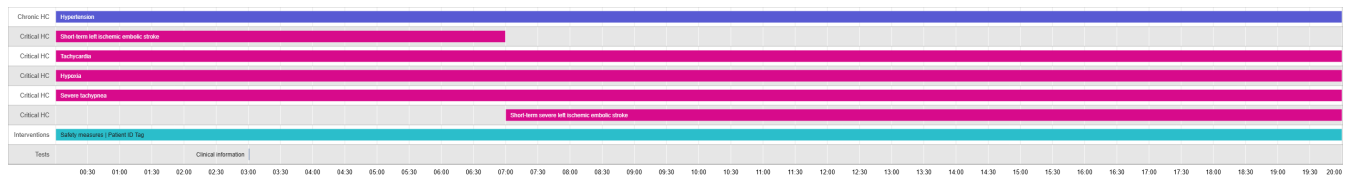
Initial notifications

Initial notifications presented to the trainee after a specified amount of time after starting the simulation

Medical test	Time
Clinical information	03:00

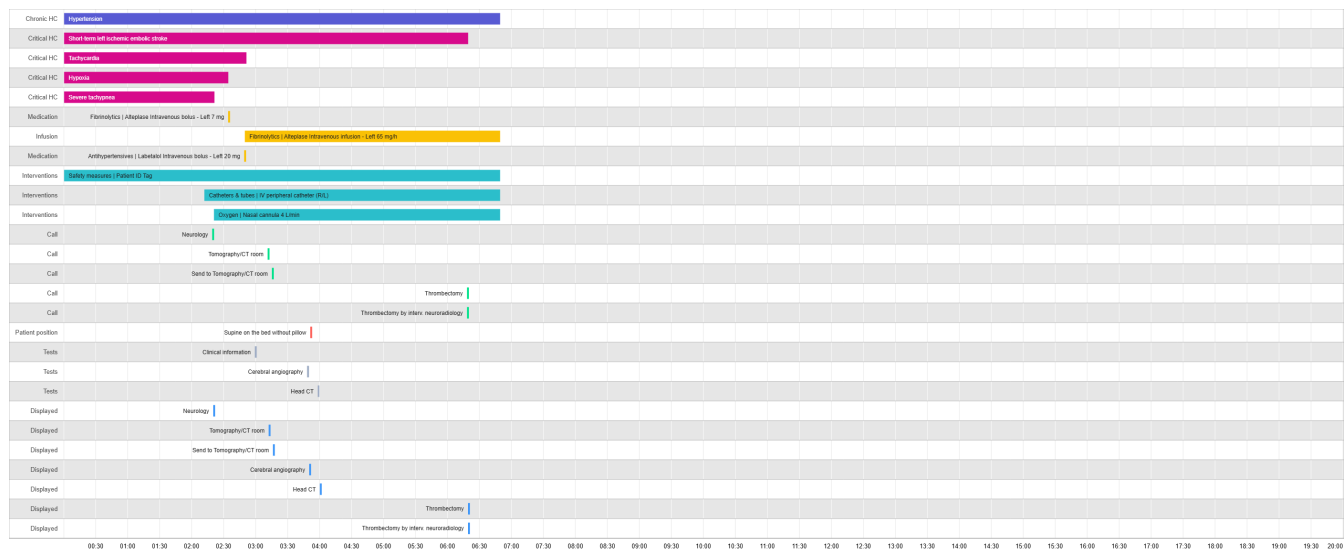
Baseline

This section is automatically generated and predicts scenario behavior assuming no actions by the trainee, which usually represents the worst-case scenario.



Optimal clinical approach - International

This section previews how the optimal approach resolves the scenario successfully. Comparison with Baseline may be useful to understand the scenario behavior.



Treatment priorities

Treatment items that are considered necessary or adequate to solve this clinical scenario are listed below. Notes: 1st Priority - mandatory items to solve the scenario successfully. 2nd Priority - optional items that are considered adequate, but are not essential. Not a Priority - unnecessary items that are considered inadequate or a waste of time.

i.4 - Call - Neurology

1st Priority

Please request:

- Cerebral CT angiogram
- Head CT

Please administer:

- Nasal-cannula 4L/min
- Labetalol IV bolus 20mg

After medication administration please ask for NIHSS (result should be

Please administer:

- Alteplase IV bolus 7mg
- Alteplase IV infusion 65mg

After that, please contact the thrombectomy.

(After medical tests displayed + oxygen+labetalol administered)

Please collect more information about patient condition. (if nothing done)

The patient is ready to undergo a thrombectomy. Do you want to proceed?

Call | Neurology

i.5 - Call - Thrombectomy

1st Priority

The patient is ready to undergo a thrombectomy. Do you want to proceed?

Call | Thrombectomy

i.6 - Call - Thrombectomy by interv. neuroradiology

1st Priority

Left MCA occlusion.

Call | Thrombectomy by interv. neuroradiology

i.7 - Interventions - Nasal cannula

1st Priority

Interventions | Oxygen | Nasal cannula = 4 L/min

i.8 - Interventions - IV peripheral catheter (R/L)

1st Priority

Interventions | Catheters & tubes | IV peripheral catheter (R/L)

i.9 - Medications - Alteplase

1st Priority

Medications | Fibrinolytics |
Alteplase Intravenous bolus -
Left = 7 mg

i.10 - Medications - Alteplase

1st Priority

Medications | Fibrinolytics |
Alteplase Intravenous infusion -
Left = 65 mg/h

i.11 - Medications - Labetalol

1st Priority

Medications |
Antihypertensives | Labetalol
Intravenous bolus - Left = 20
mg

i.55 - Tomography/CT room

1st Priority

Call | Tomography/CT room

Please contact Neurology before
sending the patient to the tomography
room. (IF call neurology not performed)

You can send the patient to the CT
room. (after call neurology performed)

i.56 - Send to Tomography/CT room

1st Priority

Call | Send to Tomography/CT
room

The patient will perform the exams.

Assessment question(s) after simulation

Questions presented to the trainee in order to have a more detailed evaluation of the use of the clinical scenario.

Summative Multiple Choice Question:

Question

What is the most likely
diagnosis?

Correct answer

Ischemic stroke

3 Incorrect answer(s)

Migraine headache

Hemorrhagic stroke

Meningitis

**Formative Multiple Choice
Question:**

Question

When you activate the code stroke, what information should you provide?

Correct answer

All the options are correct.

3 Incorrect answer(s)

Inform stroke team of patient's estimated arrival time.

Inform radiology to prepare CT scanner for stroke patient.

Inform clinical laboratory of stroke code.

**Formative Multiple Choice
Question:**

Question

What information needs to be collected within 5 minutes?

Correct answer

Check blood sugar by finger prick, point of care INR, check blood pressure, determine patient's weight, time from symptom onset, patient's age.

3 Incorrect answer(s)

Check blood sugar by finger prick, point of care INR, check blood pressure.

Determine patient's weight, time from symptom onset, patient's age.

Check blood sugar by finger prick, determine patient's weight, patient's age

Handoff question

Question presented to the trainee to assess their ability to effectively communicate patient information during a transition of care. This question is optional.

Question

Summarize this Body Interact scenario using a structured handoff pattern.

Review handoff pattern

SBAR (Situation, Background, Assessment, Recommendation): Includes current condition and reason for handoff, relevant history and context, assessment details, and recommended actions.

SOAP (Subjective, Objective, Assessment, Plan): Covers patient-reported symptoms and history, measurable data and findings, clinical impressions and diagnoses, and the treatment plan.

I-PASS (Illness Severity, Patient Summary, Action List, Situation Awareness and Contingency Planning, Synthesis by Receiver): Encompasses illness status, patient background, tasks and actions, potential changes and plans, and confirmation of understanding.

AT-MIST (Age, Time of incident or onset of symptoms, Mechanism of injury/Medical Complaint, Injuries or Inspections head-to-toe, vital Signs, and Treatments): Describes the cause of injury or medical complaint, findings from head-to-toe inspection, vital signs, and treatments provided.

Ending messages

Feedback messages presented to trainees for particular successful or failed approaches and the respective conditional rules that trigger these messages.

Title	Type	Message	Conditional
End condition	Success	Your practice meets the guidelines' requirements.	

References

1. Guidelines for Management of Ischaemic Stroke and Transient Ischaemic Attack 2008. *Cerebrovasc Dis.* 2008;25(5):457-507.
2. Guidelines for the Early Management of Patients With Acute Ischemic Stroke. *AHA Journal.* 2013;44:870-947.