SCRIPT

FALL AT THE STREET

SCENARIO #649

NAME
CHARLES HAMILTON

MEDICAL CATEGORY
Neurology

SCENARIO DIFFICULTY
INTERMEDIATE

SIMULATION ENVIRONMENT
PRE HOSPITAL

TARGET
Paramedics

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

BODY INTERACT™
CLINICAL EDUCATION

Scenario

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

Title
Fall at the street

Context
Mr. Hamilton was taking his trash out this morning when suddenly felt ill and collapsed on the floor. His daughter tried to talk to him but he couldn't express himself.

Briefing
Male, 75 years old, has a medical history of diabetes type 2, hypertension, and dyslipidemia. His daughter found him collapsed on the floor in front of his house, with facial droop, speech impairment, and unable to move the right side of his body. She immediately called Emergency Medical Services.

General learning objective
In this scenario, the learner should:
Recognize acute stroke.
Perform neurological assessments using stroke screening (FAST, FAST-ED, or race scale).
Determine eligibility for transport to a stroke center.

Specific learning objectives
Important when questioning the patient:
Characterize the main complaints, time of symptom onset, current medication

Fundamental in ABCDE:
Start vital signs vigilance in acute care (blood glucose, blood pressure, oxygen saturation)
Evaluate for the presence of stroke mimics
Perform stroke screening (FAST, FAST-ED, race scale) and detect neurological deficits

About the treatment:
Pre-notify stroke unit
Make decision transport (hospital, stroke ready hospital, or comprehensive hospital)

Environment
Pre Hospital

Specialty
Neurology

Difficulty
Intermediate

Editors
Angels Initiative

Patient characteristics

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

Avatar

First name
Charles

Last name
Hamilton

Age (years)
75

Gender
Male

Race/Ethnicity
Caucasian

Hair color
Light gray

Eye color
Brown

Smoker
No

Conscious
Yes

Sedated
No

Confused
Yes

Agitated
No

Last meal over 2h
Yes

Facial palsy
100

Speech impairment
Yes

Eyelid closure
40

Patient parameters

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

Systolic arterial blood pressure (mmHg)
185

Diastolic arterial blood pressure (mmHg)
110

Heart rate (bpm)
80

O2 saturation (%)
93

Respiratory rate (/min)
23

Blood glucose (mg/dL)
85

Temperature (°C)
36.7

Hemoglobin (g/dL)
12

Urinary output (mL/kg/h)

Weight (kg)

0.5

69

Height (cm)
175

BMI
22.5

Potassium (mEq/L)
4.1

Sodium (mEq/L)
139

ABCDE assessment

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.
Breathing		
Chest palpation	Not a priority	2L - normal; 2R - normal
O2 Sat (%)	1st Priority	93 %
Pulmonary auscultation	2nd Priority	Clear to auscultation.
Respiratory rate (breath/min)	1st Priority	23 /min
Circulation		
Blood pressure (mmHg)	1st Priority	185/110 mmHg
Capillary refill time (seconds)	1st Priority	1 second
Heart auscultation	2nd Priority	Regular rate and rhythm.
Heart rate (bpm)	1st Priority	80 bpm
Pulse palpation	Not a priority	Central - Amplitude: strong; Rhythmic; Peripheral - Amplitude: strong; Rhythmic.
Disability		
Blood glucose (mg/dL)	1st Priority	85 mg/dL
Glasgow Coma Scale	1st Priority	11 (E-3; V-3; M-5)
Pupil light reflex	2nd Priority	Right eye: 4 mm; Right eye light: 2 mm; Left eye light: 7 mm Left eye: 7 mm; Right eye light: 2 mm; Left eye light: 7 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)	1st Priority	36.7º

Dialogues

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

Medical condition

01. Can you tell me your name and your age?	1st Priority	**Patient:** Thii... boo.
02. Do you know where you are at the moment?	1st Priority	**Patient:** Haaf... weeaak...
03. What happened to him?	1st Priority	**Patient's daughter:** We were outside and suddenly his gaze was odd and fell on the floor.
04. Does he have any health problems?	1st Priority	**Patient's daughter:** He has hypertension, type 2 diabetes, and high colesterol.
05. When was the last time you saw him well?	1st Priority	**Patient's daughter:** It was just before we came outside, around half an hour ago.
06. Was he doing any effort when this happened?	2nd Priority	**Patient's daughter:** No, we were just taking the trash outside.

Medication

07. Does he take any		**Patient's daughter:** Yes, he takes

medication?		simvastatin, losartan, and metformin.
	1st Priority	
08. Has he been taking his medication properly? After question "Does he take any medication?" is asked	2nd Priority	**Patient's daughter:** I'm not sure, I just came yesterday for a weekend visit. He is normally independent with his medication.

Nutrition

09. When was the last time that he had something to eat?		**Patient's daughter:** It was at breakfast, maybe an hour ago.
	1st Priority	

Risk factors

10. Does he have any allergies?		**Patient's daughter:** Yes, penicillin, gives him a skin rash.
	2nd Priority	
11. Does he smoke?		**Patient's daughter:** Only when he was younger.
	2nd Priority	
12. How often does he drink alcohol?		**Patient's daughter:** He has a few glasses of wine at meals, nothing else.
	2nd Priority	

Diagnostic strategies

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

Decision aids

FAST scale	1st Priority	i.1	Facial droop: One side of the face doesn't move at alll Arm drift: One arm drifts compared to the other Speech: Slurred and inappropriate words

FAST-ED scale	1st Priority	i.1	Facial palsy: 1 - One side of the face droops Arm weakness: 2 - One or both arms falls rapidly Speech: 1 - Speech content clearly abnormal or names 1-2 items correctly Receptive aphasia: 1 - Patient does not understand e.g does not show two fingers Gaze deviation: 1 - Patient has clearly difficulty when looking to one side Denial: 1 - Patient is weak and does not recognize it Neglect: 1 - Patient does not recognize his/her weak arm Total score: 8 - Immediate transport to the closest Comprehensive Hospital
Race scale	1st Priority	i.1	Facial palsy: 2 - Facial gesture is completely asymetrical Arm motor function: 2 - Cannot maintain the arm and drops imediately Leg motor function: 2 - Cannot maintain the leg and drops imediately Head and gaze deviation: 1 - Present Agnosia/Negligente: 2 - There is asomatognosia and anosognosia Aphasia/ Language: 1 - Perfom one task correctly Total score: 10

Electrophysiology

12-Lead ECG	2nd Priority	Sinus rhythm.

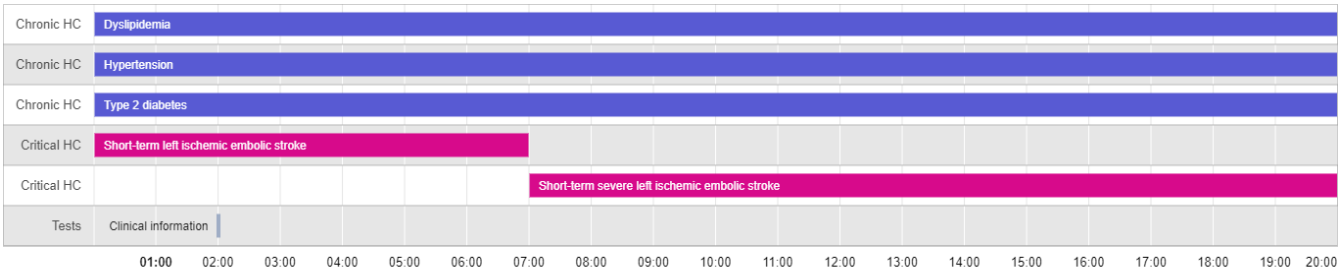
Initial notifications

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

Medical test	Time	
Clinical information	02:00	Comprehensive Stroke Center | 15 minutes away Hospital | 10 minutes away Stroke Ready Hospital | 25 minutes away

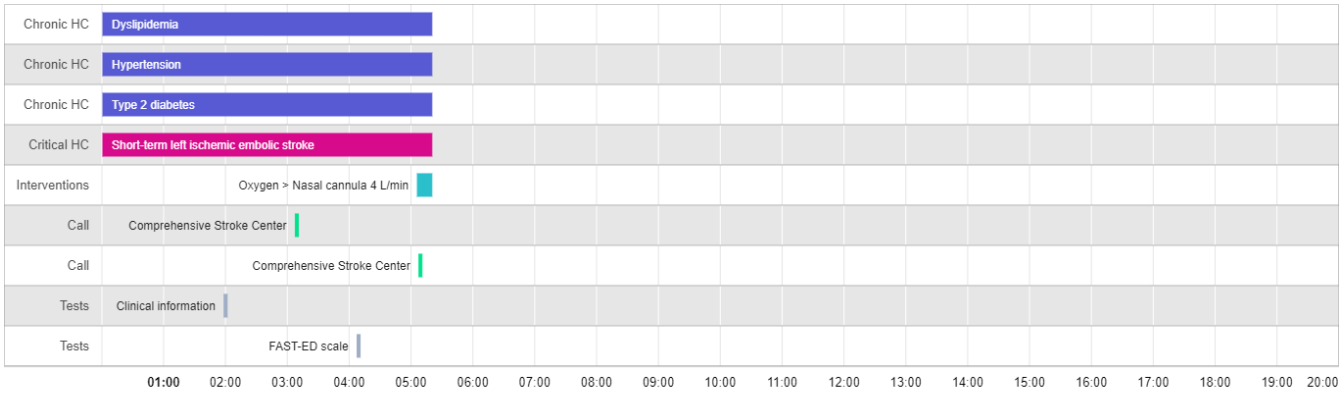
Baseline

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

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



Health conditions

This section characterizes the illnesses, or health conditions, the patient may be afflicted with in this scenario. These serve important foundational purposes in the scenario, as they can be used to: affect what the patient says in dialogues; influence how the patient deteriorates over time; condition examination, medical test and call results; and determine the adequate clinical approach required to solve the case successfully.

Chronic health conditions

Dyslipidemia

Description: High blood lipids.

Hypertension

Description: High blood pressure.

Type 2 diabetes

Description: High blood glucose level either related to low insulin synthesis, insulin resistance, or a combination of both.

Critical health conditions

Short-term left ischemic embolic stroke

Description: Moderate left cerebral artery blockage due to a thrombus originating in another part of the body, with an onset less than 4h30m ago. Associated with broca aphasia. After some time leads to severe left ischemic embolic stroke. When treated, broca aphasia is also reverted.
Solution: Fibrinolytic and thrombectomy.

Short-term severe left ischemic embolic stroke

Description: Severe blockage of a blood vessel in the left brain by a clot formed in another part of the body, with an onset less than 4h30m ago. Associated with broca aphasia. Does not directly lead to other conditions. When treated, broca aphasia is also reverted.
Solution: Fibrinolytic and thrombectomy.

Treatment priorities

Treatment items that are considered necessary or adequate to solve this scenario are listed below. Notes: 1st Priority - mandatory items to solve the case 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.2 - Call - Comprehensive Stroke Center	1st Priority	Initial: Please gather more information regarding the patient's status and contact again.
Call > Comprehensive Stroke Center		After stroke screening: The stroke team was notified.

i.3 - Interventions - Oxygen therapy Interventions > Oxygen > Nasal cannula Interventions > Oxygen > High flow mask Interventions > Oxygen > Non-rebreathing mask	1st Priority	Due to sats lower than 95%
i.36 - Call - Hospital Call > Hospital	Not a priority	We are not ready to receive and treat stroke patients.
i.37 - Catheters & tubes - IV peripheral catheter Interventions > Catheters & tubes > IV peripheral catheter	2nd Priority	
i.38 - Fluids & Electrolytes Medications > Fluids & Electrolytes > Fluids IV - Crystalloid	2nd Priority	
i.39 - Call - Stroke Ready Hospital Call > Stroke Ready Hospital	Not a priority	The Stroke Ready Hospital is too far away to receive this patient.

Differential diagnosis

Multiple choice question presented to the trainee in order to confirm whether they got the diagnosis right.

Question	What is the most likely diagnosis?
Correct answer	Acute ischemic stroke
3 Incorrect answers	Hypoglycemia
	Epileptic fit
	Drug intoxication

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
Send patient to Hospital OR Stroke Ready Hospital	**Failure**	This is the end of your virtual simulation scenario. Following the suspected stroke, the patient should have been transferred to the nearest stroke center.	If Call Hospital OR Stroke Ready Hospital is requested, the case will end in failure.
Stroke screening and send patient to Comprehensive Stroke Center	**Success**	Your practice meets the guidelines' requirements.	

References

1. Powers WJ, Rabinstein AA, Ackerson T, et al. 2018 Guidelines for the Early Management of Patients With Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke*. March 2018.

2. Lima Fabricio O., Silva Gisele S., Furie Karen L., et al. Field Assessment Stroke Triage for Emergency Destination. *Stroke*. 2016;47(8):1997-2002.

3. Pérez de la Ossa Natalia, Carrera David, Gorchs Montse, et al. Design and Validation of a Prehospital Stroke Scale to Predict Large Arterial Occlusion. *Stroke*. 2014;45(1):87-91.