

SAFETY

simulation for medical practice

SIMULATION APPROACH FOR
EDUCATION AND TRAINING
IN EMERGENCY

Intoxication University of Foggia (UniFg)



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DOCUMENT VERSION 01

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Scenario Description

Learning Target	Description	Participants
<p>Medical:</p> <ul style="list-style-type: none">• ABCDE• Identify poisoning• Treatment according to poison protocol and complication management• Call poison control center <p>CRM:</p> <ul style="list-style-type: none">• SBAR• establish role and distribute the workload• mobilize resources• closed-loop communication	<p>Where: Emergency department</p> <p>Who:</p> <ul style="list-style-type: none">• Patient• emergency medical team• Nurse• ED physician• anesthetist <p>Frame conditions: Day time</p>	<ul style="list-style-type: none">• Emergency medical team (2-3)• ED physician• ED nurses (2-3)• Anesthetist 1• Patient
<p>Notes: the emergency medical team can consist of 2 emergency medicine specialists and 2 nurses. The anesthetist as a specialist is to be considered as an accessory figure in the specific case who is called in for support if the patient's clinical condition worsens.</p>		

Scenario Briefing

Briefing (everyone)	Additional Briefing (individual Positions)	Case Briefing (Roleplayers)
<p>Male (31 years old) arrives in and with ambulance in ED. Found on the streetsleepy, poorly cooperating by the rescue team after a call from two runners.</p> <p>On the spot there are bottles of beer and residue of an unidentified substance in a syringe. No information about his previous clinics, medications or allergies. Intake time unknown</p>	<p>SP: Alcoholic bad breath, vomiting on clothes, numerous signs of venipuncture on the upper limbs. A lethargic patient, he locates and opens his eyes to pain, utters disheartened phrases</p>	<p>Others: You are on duty in the ED, receiving the patient from the ambulance. See Ambulance report and collect information from the medical colleague in the ambulance (SBAR). Ambulance report:</p> <ul style="list-style-type: none"> • Male 31 years • No medical history, no information on medications or allergies • Found on the street at 9,15 a.m. (I don't know how long he took the substances) • Pale, swety,poorly cooperative, eye opening after painful stimulus • Obtained venous access and administered O2 in mask with reservoir at 6l / min, coma cocktail: thiamine 100 mg iv, glucosdata 10% 250 ml, naloxone 0.4 mg x2 iv, flumazenil 0.2 mg iv, 250 ml physiological solution 0, 9%. <p>Vital signs:</p> <ul style="list-style-type: none"> - RR 12/min - Sat 90% - NIV BP 85/60mmHg - HR 60 bpm - Tp 35,1 - capillary blood sugar 71 mg/dl

Notes: A simulator can be very well used as well (no SP), as most of the time unconscious or barely conscious

Script SIM Nurse/Co-Instructor

List of Material

- Vital Sign Monitor
- (ECG, RR, Oxygen saturation, temperature)
- glucometer
- IV access
- blood chemistry test material
- Saline and glucose solution
- Medicines for emergency and poisoning
- material for IOT
- Nasogastric tube

Set-Up Room

- ED acute bed with air heater
- blood gas analyzer
- Vital Signs monitor
- ECG
- Phone available

Set-Up Simulator

- unkempt, dirty patient, with specific signs of habitual use of exogenous substances

Notes:

Scenario Saver

How to react if the medical problem is not identified

Patient in a coma, wasting of vital signs up to ACC

How to react if the medical problem is identified too quickly

No problem if the algorithms for intoxication are correctly applied. Focus attention on the subsequent phases for differential diagnosis and patient admission

Other comments, material needed for savers (e.g. white coat)

- in case of acc an anesthesiologist must be contacted who will collaborate in the management phases of the critical patient.
- in case of quick resolution of the clinical case, a poison control center must be contacted for the subsequent phases of patient management based on the reports received from the toxicological tests

Notes:

Scenario End Criteria

Scenario ends when...

- The ED requires blood gas analysis and sets the therapy by stabilizing the patient
- requires blood chemistry and toxicological tests.
- Contact Poison Control
- Centre for therapy on suspected alcohol and cocaine poisoning. Improvement of vital parameters and neurological state, it is possible to transport the patient to CT for differential diagnostics.

Notes: Don't let the patient die!

General note – end the scenario saying:

“The patient is now going to be taken care of, thank you for solving the case”

Simulator Set-Up, Steering

	Phase 1 Start	Phase 2 Treatment
Vitals	-HR: 60 bpm, SR -12-lead: sinus rhythm 60 bpm, st subsile in V2-V3 and AVF, non-specific abnormalities of recovery -BP: 85/60 mmHg; -SpO2: 90 %, -Resp. Rate: 11, -Temp: 35,1°C; -GCS 12 (E3 V4 M5) -capillary blood sugar 71 mg/dl Pupils: isocoric, light reaction is normal. - BGA metabolic acidosis	sat 96% if administered O2 in a venturi mask at 50% and fr 14 bpm niv bp 110/70 after volume filling with physiological solution and HR 70 bpm, normal BGA after administration of bicarbonates GCS 12 (E3 V4 M5) after administration of narcan 0.4 mg iv x2 and metadoxil 300 mg x 2 iv temperature 36.4 ° C after passive heating
Text for patient	Moaning	Moaning
Other info		
Management during scenario		If the participants don't identify poisoning PD eventually loss of consciousness with subsequent vomiting and ACC

Notes: request chest x-ray (multiple bilateral postero-basal thickenings greater to the right of the lower lobe)
 request cardiac enzymes (negative) and cardiological consultations (pending completion)
 toxicological request with cocaine (qualitative +) and alcohol (1.57 g / l)

Abstract

Learning Target:	ABCDE, identify intoxication, Closed-loop communication SBAR
Description:	young man with a probable history of addiction arrives in and by ambulance for poisoning by exogenous substances
Participants:	Emergency medical team (2-3) ED physician ED nurses (2-3) anesthetist (1)
Case Briefing:	man (31 years old) arrives in and with ambulance in ED. Found on the street sleepy, poorly cooperating by the rescue team after a call from two runners. On the spot there are bottles of beer and residue of an unidentified substance in a syringe. No information about his previous clinics, medications or allergies. I do not know the time of taking the poisons
List of Material:	Normal ED cart and monitoring, appropriate medication - Adult simulator OR - SP
Set-Up Room	- ED stretcher with sim - maybe actor
Set-Up Simulator:	- dressed, dirty - iv line - O2 mask
Scenario Saver:	The patient loses consciousness if a poisoning is not identified and respiratory, circulatory and metabolic decompensation is not treated
Scenario End Criteria:	the patient is stabilized, the poison control center is contacted, first level examinations are performed (chest x-ray, ega and ECG) it is decided to perform neurological consultancy and head CT scan for differential diagnosis
Management during Scenario:	Change to sim needed if start with actor
Other:	

