***COMMON STRUCTURE FOR HIGH FIDELITY SIMULATION SCENARIO***

SCENARIO TITLE

HELMo SIAMU 1 – Complicated intubation through the cervical collar

SCENARIO OVERVIEW

DUMMY TYPE:

HEALTHCARE SERVICE: medical-surgery intensive care

TARGET GROUP[[1]](#footnote-1): four S30 CHR Citadelle Liège intensive care nurses and four SIAMU students

ESTIMATED SCENARIO DURATION: +/- 15 minutes

SCENARIO SUMMARY[[2]](#footnote-2):

Managing a neurological degradation that requires intubation in a patient with a cervical collar, skull fracture at temporal level and cervical fracture after a fall in stairs in a situation of alcoholic impregnation. Admission at 21:45 – Arrival of the night team.

EDUCATIONAL OBJECTIVES

GENERAL OBJECTIVES:

* To be able to work with new colleagues and identify a leader.
* To be able to identify an emergency situation and to manage it.
* To be able to develop interprofessional communication, including through ISBAR Tool.
* To be able to find one’s place in a team work in an emergency situation.
* To be able to make relevant gestures depending on the situation, respecting professional norms.
* To be able to select and handle material specific to difficult intubations.

SCENARIO-SPECIFIC OBJECTIVES:

PARTICIPANTS’ ROLE

|  |  |  |  |
| --- | --- | --- | --- |
| STUDENT | SIAMU intern nurse | 1 |  |
| PROFESSIONAL | Nurse | 1 |  |
| TRAINERS[[3]](#footnote-3) | Doctor  Trainer  Trainer | 1  1  1 | Take the call and intubates  Commands dummy settings  Dummy voice |

EQUIPMENT LIST[[4]](#footnote-4)

Medical supplies:

- **Circulation**[[5]](#footnote-5):

Monitoring, ECG cable with 5 branches, electrodes, Sphygmomanometer (PNI), pulse oximeter cable, thermometer.

2 peripheral catheters: one sealed and one perfused: bag, extension, valves, semi-permeable dressing (Tegaderm, IV 3000…).

- **Ventilation**[[6]](#footnote-6):

Aquapack oxygen mask.

Intubation material:

* Suction terminal and suction tubes
* Bag valve mask, mask + O2 connection
* Laryngoscope, blade 3, endotracheal tube 7.5 mm, lubricant, Magyll forceps, 10 ml syringe, tube fixation, connection, nose filter
* Airtrach

Respirator, gas and electricity connection.

- **Miscellaneous**[[7]](#footnote-7):

Cervical collar.

Crash cart with intubation material, reanimation drugs, oxygen therapy material.

Syringes, needles, compresses, alcohol, hand sanitizer.

Pupil lamp.

Urinary catheter with urines.

* **Medicines and solutes**:

1 Plasmalyte perfusion, 1000 ml in 24h.

Material for induction during intubation: Diprivan, Sufenta, Dormicum, Ketabar, Nimbex.

* **Documents**[[8]](#footnote-8): Today’s parameters sheet – biology results – ECG
* **Accessories**[[9]](#footnote-9): Gloves, masks, crash cart, bin.
* **Environment**[[10]](#footnote-10): Telephone, hoists, syringe driver and pumps.

SCENARIO PREPARATION

SIMULATION TYPE:

DUMMY TYPE:

SIMULATOR PREPARATION:

- Setting: corresponding to initial state (cf. table)

- Positioning[[11]](#footnote-11): bet (horizontal) – Cervical collar – No pillow

- Accessories[[12]](#footnote-12): Pupil anisocoria

Oxygen mask, Aquapack,

Pulse oxymetre, ECG monitoring, PNI.

2 peripheral catheters including 1 perfused with 1 litre Plasmalyte A and the other sealed.

Urinary catheter.

ENVIRONMENT PREPARATION[[13]](#footnote-13):

Suction system with suction tubes, gloves and masks.

Plugged and checked respirator.

Cart with intubation material.

Drawer with material for difficult intubation.

PREPARATION OF ADDITIONAL EXAMINATIONS[[14]](#footnote-14):

PREPARATION OF STUDENTS/LEARNERS[[15]](#footnote-15):

* Signature of the chart during the first session, prior explanations.
* Explanations in the beginning of the day, discovery of the laboratory, material and possibilities of the dummy, security rules, professional outfit at the start of the session.
* Description of the principles of respect, waiting for confidentiality rule.
* Identification of the principle of formative evaluation at the end of the session and of the interest of collaborative learning, of co-evaluation and of peer evaluation.
* Presentation of the general principles of the activity.

BRIEFING

TIME:

SITUATION[[16]](#footnote-16):

DOCUMENTS[[17]](#footnote-17):

PATIENT DATA[[18]](#footnote-18)

Surname: Age:

Name: Weight:

Date of birth: Height:

Allergies: Gender:

History:

Medical history:

Surgeries:

Ob/gyn:

Personal treatment:

FRAMES OF REFERENCE / EXPERTS RECOMMENDATIONS[[19]](#footnote-19)

DEBRIEFING IDEAS

SCENARIO PROGRESS

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| **Monitor setting** | **Patient dummy** | **Students’ interventions**  **(what we would like to see…)** | **Messages** | |
| **Beginning time of scenario: 21:45 next shift** | | | | |
| **Initial state:**  AP: 160/85 and 110 mm Hg  HR: 75 / Min RSR  RR: 21 / min  SpO2: 92%  T°: 36.9  ECG curve [[20]](#footnote-20):  Clinical signs:  - eyes[[21]](#footnote-21)  - pupils[[22]](#footnote-22): 6  - pain scale: 2 | Sinus  Anisocoria | Observes the patient  Installs non-invasive monitoring: ECG, PNI, pulse oximeter and thermometer.  Sets the alarms  Neuro evaluation – GCS 14  Observes the anisocoria (mydriasis on the right) and the deficiency on the left | Patient responds normally, slightly slowed down  Pain scale: VAS: 2 | |
| **State 2:**  If problem identified and appropriate reaction, parameters stay globally stable  AP: 165/90  HR: 70  RR: 18/min  SpO2: 90%  ECG curve:  Clinical signs:  - eyes[[23]](#footnote-23)  - pupils[[24]](#footnote-24)  - auscultation  pulmonary | RSR  Anisocoria | * Phones to the doctor and notifies the emergency.   Passes instructions to their colleague, distribution of gestures.  Calls backup  A/ takes the gas mask and pumps waiting for the doctor, then passes the baton  B/ prepares the intubation material  C/ prepares the induction drugs and administers them  B/ or C/ assists the doctor during intubation | Deteriorates, does not respond anymore, VAS 3  The doctor says he arrives right away and passes the instruction to: prepare the intubation material.  Diprivan, Sufenta and Nimbex  500 ml hypertonic saline solution | |
| **State 3:**  Gradual deterioration over 10 minutes resulting to:  AP: 180/100 mm Hg  HR: bradycardia at 40  RR: 10/min  SpO2: 85%  If doesn not identify neurological degradation |  | Failed intubation with cervical collar  B or C prepares the AIRTRACH  B or C double checks the parameters  The doctor intubates with AIRTRACH | Requests AIRTRACH  The doctor pumps air waiting for the material  To plan a return to the scanner after intubation. | |
| **End time of scenario:** | | | | |

SCENARIO EVALUATION

POSITIVE ASPECTS:

TO IMPROVE:

REALISM:

USED PROTOCOLS:

PROTOCOLS TO IMPLEMENT:

1. Skill level and number of participants [↑](#footnote-ref-1)
2. Scenario key words [↑](#footnote-ref-2)
3. Control of dummy setting / Debriefing/ Dummy voice/ Facilitator/ Disruptive element/ external stakeholder (phone speaker) [↑](#footnote-ref-3)
4. Prefer Check-list for quick check-up [↑](#footnote-ref-4)
5. Catheters, infusion lines, needles (IV, intraosseous, subcutaneous), blood collection tubes, tourniquet… [↑](#footnote-ref-5)
6. Nasal cannulas, non-rebreather masks, intubation supplies… [↑](#footnote-ref-6)
7. Capillary glycaemia, urinary catheter, thermometer, stethoscope, gloves, hand sanitizer…. [↑](#footnote-ref-7)
8. Patient medical file, transmission sheet, ECG, recommendation summary sheet [↑](#footnote-ref-8)
9. Pen, phone, diagnostic penlight for pupils, work outfits (white coats…) [↑](#footnote-ref-9)
10. Wig, basin, tissues with blood, patient’s suitcase… [↑](#footnote-ref-10)
11. Half sit-up, lying down [↑](#footnote-ref-11)
12. Presence of oxygen, of a drip tube, already scoped… [↑](#footnote-ref-12)
13. Raised bed rails, presence of patients belongings, tissues, needed information received

    (Displayed thermometer, glycaemia…) [↑](#footnote-ref-13)
14. If foreseen in the scenario, prepare additional examinations to display (chest radiograph, blood test…) [↑](#footnote-ref-14)
15. Preliminary analysis of documents if needed [↑](#footnote-ref-15)
16. Location where the scenario takes place, information before entering the simulation room [↑](#footnote-ref-16)
17. Document handed during the briefing/ care record, biological results, written transmissions … [↑](#footnote-ref-17)
18. Care record layout or if not necessary to the scenario, voice memo for the trainer [↑](#footnote-ref-18)
19. Quoted sources, bibliography [↑](#footnote-ref-19)
20. Sinus, Fibrillation.... [↑](#footnote-ref-20)
21. Open, half-closed, closed [↑](#footnote-ref-21)
22. Miosis, mydriasis, anisocoria, normal-reactive [↑](#footnote-ref-22)
23. Open, half-closed, closed [↑](#footnote-ref-23)
24. Miosis, mydriasis, anisocoria, normal-reactive [↑](#footnote-ref-24)