

SEIZURES

MODULE: ACUTE CARE

TARGET: FY1 & FY2 TRAINEES AND FINAL YEAR MEDICAL STUDENTS

BACKGROUND:

Prioritisation is extremely important in the initial assessment and management of patients with acutely altered levels of consciousness and seizures. FY trainees should be able to work within and lead a team to safely assess and treat these patients in a timely manner.

RELEVANT AREAS OF THE FOUNDATION PROGRAMME CURRICULUM

<p>1 Professionalism</p>	<p>1.4 Team Working:</p> <ul style="list-style-type: none"> • Demonstrates clear and effective communication within the team <p>1.5 Leadership:</p> <ul style="list-style-type: none"> • FY2 demonstrates extended leadership role by making decisions and dealing with complex situations across a greater range of clinical and non-clinical situations
<p>6 Good Medical Practice</p>	<p>6.2 Evidence, guidelines, care protocols and research</p> <ul style="list-style-type: none"> • Recognises, understands and follows appropriate guidelines
<p>7 Good clinical care</p>	<p>7.5 Safe prescribing</p> <ul style="list-style-type: none"> • Prescribes drugs and treatments appropriately, clearly and unambiguously in accordance with Good Practice in Prescribing Medicines (GMC, 2008) • Uses the BNF plus pharmacy and computer-based prescribing-decision support to access information about drug treatments, including drug interactions • Performs dosage calculations correctly and verifies that the dose is of the right order • Chooses appropriate intravenous fluids as vehicles for intravenous drugs and calculates the correct volume and flow rate • Prescribes oxygen appropriately including to patients with the risk of carbon dioxide retention • Relates prescribing activity to available prescribing guidelines / audit data eg antibiotic usage <p>7.7 Infection control and hygiene</p> <ul style="list-style-type: none"> • Demonstrates correct techniques for hand hygiene with hand gel and with soap and water • Takes appropriate microbiological specimens in an timely fashion • Follows local guidelines / protocols for antibiotic prescribing <p>7.9 Interface with different specialties and with other professionals</p> <ul style="list-style-type: none"> • Understands the importance of effective communication with colleagues in other disciplines



<p>8 Recognition and management of the acutely ill patient</p>	<p>8.1 Promptly assesses the acutely ill, collapsed or unconscious patient</p> <ul style="list-style-type: none"> • Uses Airway, Breathing, Circulation, Disability, Exposure (ABCDE) approach to assessing the acutely unwell or collapsed patients • Uses the GCS or Alert, Voice, Pain, Unresponsive (AVPU) to quantify conscious level • Investigates and analyses abnormal physiological results in the context of the clinical scenario to elicit and treat cause • Uses monitoring (including blood glucose) to inform the clinical assessment • Asks patients and staff appropriate questions to prioritise care • Seeks senior help with the further management of acutely unwell patients both promptly and appropriately • Summarises and communicates findings to colleagues succinctly • Appropriately communicates with relatives/friends and offers support <p>8.2 Responds to acutely abnormal physiology</p> <ul style="list-style-type: none"> • Formulates treatment plan in response to acutely abnormal physiology taking into account other co-morbidities and long-term conditions • Administers and prescribes oxygen, fluids and antimicrobials as appropriate (see Good Clinical Care: Safe Prescribing and Infection Control) • Recognises when arterial blood gas sampling is indicated, identifies abnormal results, interprets results correctly and seeks senior advice • Plans appropriate action to try to prevent deterioration in vital signs • Reassesses ill patients appropriately after starting treatment • Recognises the indicators for intensive care unit review when physiology abnormal <p>8.3 Manages patients with impaired consciousness, including seizures</p> <ul style="list-style-type: none"> • Assesses conscious level (GCS or AVPU) • Treats ongoing seizures • Recognises causes of impaired consciousness and seizures and seeks to correct them • Recognises the potential for airway and respiratory compromise in the unconscious patient (including indications for intubation) • Understands the importance of supportive management in impaired consciousness • Seeks senior help for patients with impaired consciousness in an appropriate and timely way
<p>11 Investigations</p>	<p>11.1 Investigations</p> <ul style="list-style-type: none"> • Requests investigations appropriate for patients' needs in accordance with local and national guidance to optimise the use of resources • Seeks out, records and relays results in a timely manner • Plans/organises appropriate further investigations to aid diagnosis and/or inform the management plan • Provides concise, accurate and relevant information and understands the diagnostic question when requesting investigations • Understands what common tests (Table 1) and procedures entail, the diagnostic limitations and contraindications, in order to ensure correct and relevant referrals/requests • Interprets the results correctly within the context of the particular patient/presentation e.g. plain radiography in a common acute condition • Prioritises importance of investigation results

INFORMATION FOR FACULTY

LEARNING OBJECTIVES:

- ABCDE assessment and initial management of patient with altered conscious level and seizures (to include general supportive treatments and specific drugtherapies)
- Appropriate call for help and concise transfer of information
- Management of status epilepticus

SCENE INFORMATION:

- Location: Emergency Department
- Expected duration of scenario: 15 mins (a) / 10 mins (b)
- Expected duration of debriefing: 25 mins (a) / 15 mins (b)

EQUIPMENT & CONSUMABLES

- Mannequin: On ED trolley, with full O2 cylinder
- Stocked airway trolley
(Specifically: Airway adjuncts (OPA, NPA))
- O2 and selection of masks incl. NRB
- Monitoring equipment (SpO2, ECG, NIBP)
- Syringes, flushes, IV fluid and giving sets
- Simulated drugs (Benzodiazepines, Phenytoin, Levetiracetam, antibiotics as per local protocols)
- Blood bottles, culture bottles, request forms
- Observation chart, medical note paper, drug chart
- Stocked crash trolley
- Mock-up anaesthetic equipment

PERSONS REQUIRED

FY Trainee to lead scenario
Emergency Department assistant staff (Nurse, FY, Medical student)
Medical Registrar (If requested)
ITU Registrar (If requested)

PARTICIPANT BRIEFING: (TO BE READ ALOUD TO PARTICIPANT)

1. Scene-setting: Recognition and initial management of the acutely unwell patient are essential skills for FY doctors. Today we would like one of you to assess a patient in the Emergency Department who has been brought in by ambulance. Please assess the patient methodically and treat the problems / symptoms that you find.
2. Assistance: An assistant will be present as the scenario begins (faculty will tell you who this is and what experience they have). If other (appropriate) help is needed at any stage, ask for it (faculty will tell you how to do this).
3. The scenario will run until a natural conclusion, after which we will regroup to discuss the scenario and any related subjects that the group raises. This is not a test of the person who participates in the scenario and they will not be judged in any way on their performance.
4. We may then move back to the manikin again for the next steps in the management of the patient, followed by a further discussion of any matters that arise.

'VOICE OF MANIKIN' BRIEFING:

Your name is Andrew (Andrea) Bradley. You are a 45 year old council worker. You had a grand mal seizure while you were having lunch and another in the ambulance on the way to hospital. You have remained very drowsy since the seizure stopped, you do not speak and only make snoring sounds.

IN SCENARIO BRIEFING:

The patient is Andrew (Andrea) Bradley, a 45 year old council worker who had a grand mal seizure while eating lunch. The seizure lasted 3 minutes and stopped spontaneously but the patient remained very drowsy so colleagues called an ambulance. The patient had another seizure in the ambulance on the way to hospital and was given rectal diazepam which terminated the seizure after 4 minutes.

Please role play an emergency department nurse or junior doctor as directed by the faculty. Please assist the staff member who comes to assess the patient in the Emergency Department.

If asked, give the following collateral history (from colleagues):

PMHx: Nil, but family history of epilepsy
Work stress +++ recently, headaches every day for past couple of weeks.

Usual meds: nil

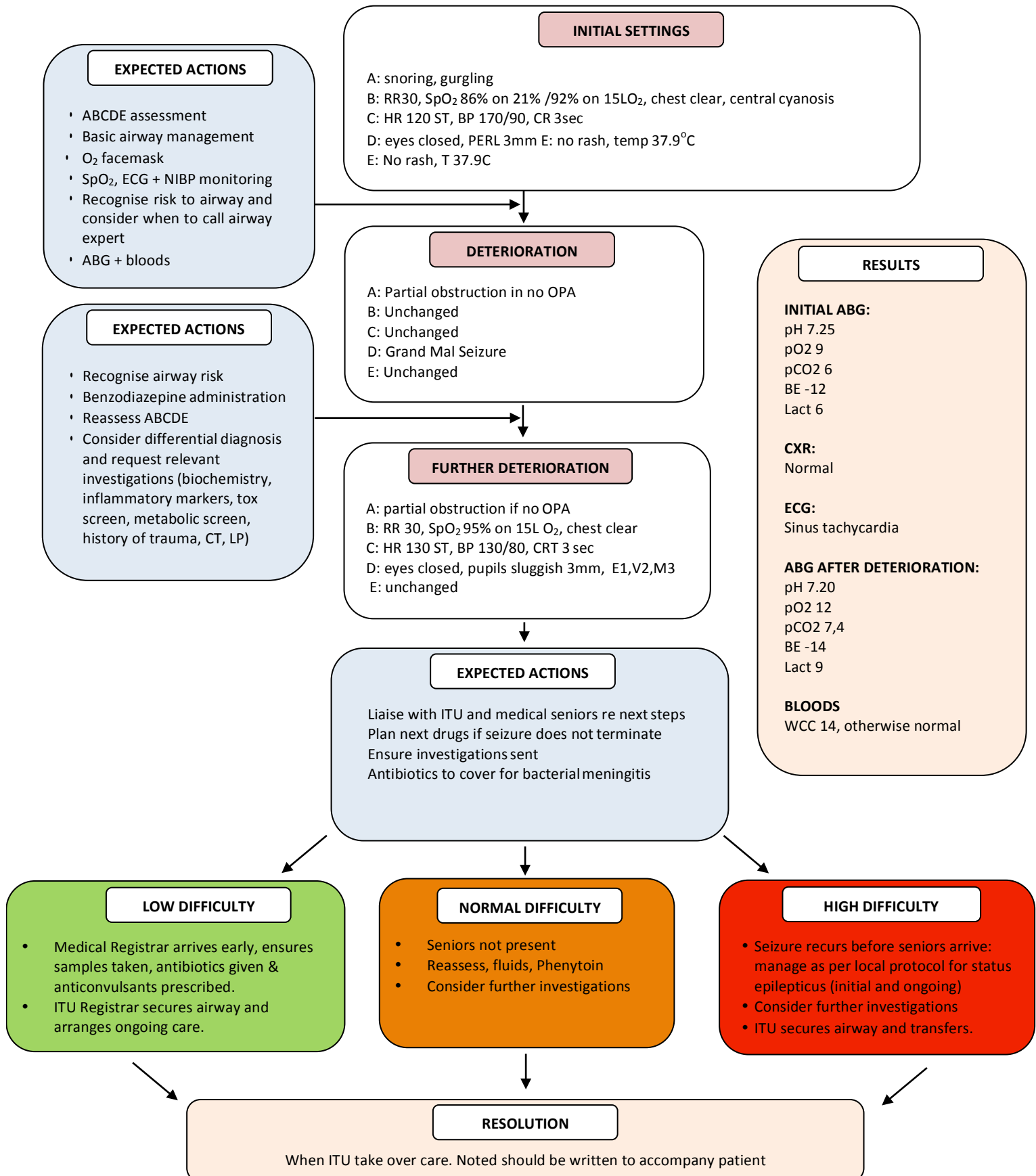
NKDA

ADDITIONAL INFORMATION

The main focus of the first part of this encounter is the initial management of seizures.

If the participant progresses quickly through the scenario and faculty wish to expand the clinical challenge, then the patient could deteriorate and progress to status epilepticus before the more senior medical staff arrive.

CONDUCT OF SCENARIO



DEBRIEFING

POINTS FOR FURTHER DISCUSSION:

- General supportive management of patient during seizure and in post-ictal phase
- When to be concerned about airway and when to intervene to protect it
- Review of guidelines / protocols for pharmacological management of seizures
- Definition of status epilepticus and review of NICE guidance / local guidelines
- Task prioritisation, team interactions and leadership in status epilepticus

DEBRIEFING RESOURCES

1. Local protocol for management of seizures and status epilepticus
2. NICE guidance CG137 : The epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and secondary care available at <http://www.nice.org.uk/nicemedia/live/13635/57779/57779.pdf>

INFORMATION FOR PARTICIPANTS

KEY POINTS:

- Initial approach to the patient with seizures is ABCDE.
- Standard drug treatment guidelines for management of seizures – benzodiazepines, phenytoin, ITU involvement if these drugs ineffective
- Remember risk of aspiration during seizure and post-ictal phase If seizure recurs – get help!

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PARTICIPANT REFLECTION:

What have you learnt from this experience? (Please try to list 3 things)

How will your practice now change?

What other actions will you now take to meet any identified learning needs?

PARTICIPANT FEEDBACK

Date of training session:.....

Profession and grade:.....

What role(s) did you play in the scenario? (Please tick)

Primary/Initial Participant	
Secondary Participant (e.g. 'Call for Help' responder)	
Other health care professional (e.g. nurse/ODP)	
Other role (please specify):	
Observer	

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I found this scenario useful					
I understand more about the scenario subject					
I have more confidence to deal with this scenario					
The material covered was relevant to me					

Please write down one thing you have learned today, and that you will use in your clinical practice.

How could this scenario be improved for future participants?
 (This is especially important if you have ticked anything in the disagree/strongly disagree box)



FACULTY DEBRIEF – TO BE COMPLETED BY FACULTY TEAM

What went particularly well during this scenario?

What did not go well, or as well as planned?

Why didn't it go well?

How could the scenario be improved for future participants?