The ABCDE approach to assessment

Learning outcomes

By the end of this workshop candidates should be able to:

- use a structured approach to provide a handover
- apply the ABCDE approach when assessing and treating a deteriorating patient in case-based discussions/simulated
- identify and treat life-threatening problems in a deteriorating patient as they are found
- recognise when to call for help/escalate/refer to a specialist

Instructor Information

The scenarios have been written to give consistency in teaching and may be used in any order. Their use will ensure that candidates are exposed to a variety of clinical problems that can be identified following assessment, and treated. The patient will show some improvement as correct treatment is delivered, so for each part of the ABCDE assessment, following the signs/symptoms, the candidates should be asked for their conclusion before proceeding. Slides have been produced for this session but are not essential if a scenario based approach covers the same material. The subsequent slides will reveal the key problems and suggested interventions. At the end of each scenario, discuss further actions/treatment.

Most candidates have had prior experience of the ABCDE approach through reading the manual and CASDemo. Therefore a demonstration is not required at the beginning of this session.

These scenarios can be led as either (or a combination of):

- Case-based discussion using visual aids
- Simulation-based workshop +/- manikin (consider using two candidates each scenario)

It is recommended that the first scenario is delivered as an in-depth case discussion and that subsequent scenarios may be delivered in less detail. Further scenarios may be used if times available after those presented here are completed. The instructor should consider the candidates background in presenting additional scenarios.

When starting the scenario, the background information for the candidates should be delivered in an ISBAR (Identify, Situation, Background, Assessment, Recommendation) or RSVP (Reasons, Story, Vital signs, Plan) format, according to local practice. The same format should also be used for a handover at the end of a scenario.

At least one Australian Resuscitation Council ALS2 Instructor, and one other member of faculty who is either a full instructor or an instructor candidate, must supervise the workshop. Use the following sequence in each scenario:

- present a handover using the ISBAR structure
- perform an assessment of the patient using the ABCDE approach:
  - assess responsiveness
  - **A**irway: check patency
  - **B**reathing: check respiratory rate, expansion, effort, percussion, breath sounds, SpO_2 (RATES approach optional)
  - **C**irculation: check pulse, blood pressure, capillary refill, urine output
  - **D**isability: assess conscious level (AVPU, GCS), and pupils, measure blood glucose
  - **E**xposure: temperature, assess the whole patient**,** look for evidence of haemorrhage, rashes etc.

Instructor information – points for discussion/further demonstration

Initial treatment versus definitive intervention

Use of oxygen/fluids

Use of an Early Warning Score

When/who/how to call for help

Summary

- use of a structured approach when giving a handover
- application of the ABCDE approach to a simulated situation
- identification and treatment of life-threatening problems as they are found
- call for help/escalation/referral to the appropriate specialist at the appropriate time

Clinical cases

Case 1: Airway and Breathing problem – respiratory failure

Clinical setting and history

I: You have received a call from a nurse

S: Requesting urgent help with a patient no longer tolerating NIV

B: Bernard is aged 75, a life-long heavy smoker and he was admitted yesterday with an infective exacerbation of COPD, and was started on non-invasive ventilation (NIV)

A: He is unresponsive, hardly breathing, appears blue and the NIV mask is on the floor.

R: He needs urgent assessment.

	Assessment	Treatment/Action	Response
A	Snoring-like noises, using accessory muscles to breathe **He has signs of airway obstruction**	Head tilt, chin lift Attempt insertion of an airway High flow oxygen via face mask	Snoring noise clears Airway not tolerated See-saw movement stops
B	Centrally cyanosed RATES approach; R - RR 10 min^{-1} A - Wheezes heard bilaterally, course crackles at left lung base T – Nil E - Accessory muscle use, paradoxical movement of chest and abdomen S - SpO_2 84% on air **He requires urgent support of his ventilation**	Ventilation started bag mask and oxygen Expert help/resuscitation team called	SpO_2 improves to 89%
C	Cool, clammy peripheries Radial pulse 'bounding', regular 110 min^{-1} BP 135/95 mmHg, CRT <2 s **He looks hypercapnic**	IV cannulation, fluids started slowly ABG sample taken	No change
D	Responds to voice by lifting his head Pupils equal and reacting to light. Blood glucose 6.4 mmol L^{-1}	Nil	No change
E	Temperature 36.8˚C	Nil	Nil

Plan:

He requires urgent critical care review.

Case 2: Airway and circulation problems - septic shock

Clinical setting and history

I: Staff calling requesting urgent assistance
S: A patient observations have triggered an escalation in care is required
B: Mary was admitted last night with abdominal pain.
A: She has a rapid weak pulse, an increased respiratory rate and is unresponsive to voice.
R: Mary requires immediate assessment.

	Assessment	Treatment/Action	Response
A	Making snoring noises Increased effort to breathe See-saw movement of abdomen **She has signs of airway obstruction**	Head tilt, chin lift Oropharyngeal (OP) airway Nasopharyngeal (NP) airway High flow oxygen via facemask	Snoring noise clears OP airway not tolerated NP airway tolerated See-saw movement stops
B	R - RR 28 min^{-1} A - Bilateral reduced chest expansion and breath sounds Percussion note resonant L= R T – Nil E – Increased effort S - SpO_2 poor signal	Continue high flow oxygen	No change SpO_2 eventually displays 97%
C	Cool peripheries Radial pulse is absent Low volume, regular carotid pulse, rate 110 min^{-1} BP 75/40 mmHg, CRT >6 s **She has signs of hypovolaemia**	IV access obtained Blood sample taken IV fluid bolus 500 mL given Expert help/resuscitation team	Radial pulse present
D	Responds to pain with a grimace Pupils equal, react to light Blood glucose 4.8 mmol L^{-1}	Urgent critical care review	No change
E	No bleeding or rashes Cold and clammy centrally Warmer peripherially Temperature 37.8˚C	Initiate treatment for sepsis	No change

Plan:

Candidates should identify/suspect sepsis and start treatment:

- give high flow oxygen
- initiate fluid resuscitation; give fluid challenges in divided boluses of 250-500 mL of crystalloid to a maximum volume of 30 mL kg^{-1} body weight - maintain normal glucose level
- take blood cultures and give appropriate antibiotics
- measure lactate; consider use as a guide to fluid resuscitation
- measure urine output

Case 3: Disability problem - DKA

Clinical setting and history

I: You receive a call from a junior colleague

S: asking you to review urgently a 35-year-old man with a decreased consciousness.

B: Undergoing preparation for colonoscopy tomorrow, insulin controlled diabetic with chronic renal impairment

A: He has been increasingly confused this morning

R: Please assess him immediately

	Assessment	Treatment/Action	Response
A	Clear airway No abnormal sounds Dry lips/mount **There is no evidence of airway obstruction**	High flow oxygen via facemask may be considered	No change
B	R - RR 28 min^{-1} A - normal, symmetrical chest expansion, breath sounds and percussion note T – Nil E – No increased effort/normal S - SpO_2 100% on high flow oxygen **His SpO_2 indicates that the oxygen concentration could be reduced**	inspired oxygen concentration reduced	SpO_2 96%
C	regular radial pulse - rate 90 min^{-1} BP 120/55 mmHg, CRT <2 s normal heart sounds, ECG monitor **She has signs of hypovolaemia**	IV access obtained IV fluid considered Blood samples taken 12-lead ECG requested	Await results
D	A**V**PU - confused/drowsy pupils equal, react to light blood glucose 23.6 mmol L^{-1} no insulin given today keytones present in urine previous bloods (from records) Creatanine 186 µmol L^{-1} (60 – 110) K^+ 4.3 mmol L^{-1} (3.5-5)	Insulin Fluids Consider obtaining second IV access Follow local DKA protocol Urgent ICU review	No change
E	warm dry skin, reduced skin turgor no bleeding or rashes temperature 36.2 C	Nil	No change

Plan:

She requires urgent ICU review and treatment for diabetic ketoacidosis – Insulin/fluids