

Instructor guide for APLS R 7e

Welcome to the 7th edition update of the Advanced Paediatric Life Support recertification (APLS R) course. The APLS working group has reviewed, revised, and updated all aspects of the course following the most recent international paediatric resuscitation guideline change. Both the manual, e-modules and the face-to-face teaching materials have been reviewed and are available on the ALSG website.

This instructor guide has been developed as an additional useful resource for all faculty. It will provide established instructors with access to the changes made in the 7e structure of the course. It provides guidance on how to deliver the course to allow for the best educational experience for candidates.

You will also need to read all the supporting documents for the course that are found in the 'Course preparation' folder on the website as well as all the teaching materials.

The learning outcomes of this guide are that you will:

- Understand the running of an APLS R course and the preparation required from you as an instructor or instructor candidate.
- Recognise what your contribution will be to the simulation stations.
- Understand the role of the 'faculty helper' (FH).
- Understand how core skills are observed within the simulations.
- Identify the importance and key components of the learning conversations that you facilitate.
- Have an awareness of how continuous assessment is used during the course.

APLS R programme

Pre-course faculty meeting: Teams or Zoom

About 1 week before the start of the 1-day face-to-face course, the course director (CD) holds an online faculty meeting that will last approximately 1 hour. As not everyone will be able to attend this meeting, it will be recorded and made available for all faculty to listen to before they attend the course. This meeting gives the faculty an opportunity to discuss the outline of the 7e course, update and any guideline or practice changes that are relevant to the course. They will also explain how the new 'faculty helper' (FH) role will work so that instructors have time to prepare their simulations when they meet face-to-face.

Welcome and introductions

The APLS R course starts with a face-to-face faculty meeting while candidates attend for registration and refreshments. Faculty members will be welcomed by the course directors(s) and the meeting will start with introductions, with each faculty member introducing themselves, including their instructor status (full instructor, recertifying instructor).

All instructors should have received pre-course information and will have been enrolled on to the course on the ALSG website (access in the 'my courses' section) which will also allow access to the candidate groups for assessment scoring once the progress logs become paperless.

APLS centres will vary in course set-up, so if needed, new instructors can be shown the rooms and layout of the centre and familiarise themselves with the equipment used.

Lectures

The Welcome lecture is usually delivered by the course director. It introduces the course and gives an overview of the programme and explanation of continuous assessment. The other update lecture is either delivered by the course director or other experienced instructor. This is followed by a simulation demonstration, again led by experienced instructors.

Lecture slides are available online in the instructor resources with speaker notes included. They are on PowerPoint and can be personalised to a degree as long as the content of the lecture is not changed, and it does not become longer than allocated on the programme. Any changes must be shared with the course director before the course. You should have plenty of notice to prepare your lecture if you have been allocated one on the programme.

All recertifying instructors are expected to attend the lectures.

Simulation demonstration

All faculty are expected to attend the simulation demonstration. The demonstration is best delivered by experienced full instructors. **It is followed by two questions for candidates to discuss in partners, not a simulation debrief.** These are more effective for their learning than watching a debrief because they are actively engaged. This needs to be facilitated by the CD or the experienced instructor who gave the lecture. They should allow and encourage genuine discussion amongst candidates. This is followed by a facilitated discussion about leadership and communication.

The demonstration should be as 'perfect' as possible, **without deliberate mistakes** and with a very clear purpose to show candidates what we expect from them throughout the course. It should be rehearsed during the previous lecture. Experienced faculty members should take on the role of faculty helper and team lead candidate and can be helped by the rest of the faculty. The lead instructor should also be an experienced instructor.

The demo is of a cardiac simulation. It provides an opportunity to demonstrate an ABCDE approach to arrest, the BLS algorithm, defibrillation as a 'silent run through' skill and to introduce the simulation structure including a faculty helper.

Simulations

(see 'Guidance for running simulations' on page 9 of this document)

If possible, all simulations should have 3 instructors in the room and must include at least one instructor who is not recertifying.

Faculty lead instructor

Faculty lead instructor will introduce the simulation to the candidates, brief the initial team leader and team member together and introduce the faculty helper. They will then allow a couple of minutes for the TL and TM to prepare before the faculty helper starts the simulation by placing the prompt card onto the manikin.

During the simulation the faculty lead instructor will 'manage' the simulation by controlling the patient and their observations through the patient monitoring system.

After termination of the simulation, the faculty lead instructor will facilitate the candidates' debrief at the end leading the learning conversation and opening up the discussion points.

Faculty helper

The faculty helper works from within the simulation as if they are a **team member** providing information and observations and if necessary, giving prompts to the team leader such as "the child is looking blue now, is there something you'd like me to do". This is not the same as the faculty role in APLS 6e; they should aim to be fully immersed within the simulation carrying out tasks under the direction of the team leader. The faculty helper's main purpose is to steer the scenario so that the team leader and members can identify key treatment points and learning outcomes. The faculty helper should avoid asking questions like "Tell me what you are thinking" which imply that they are standing outside the simulation and simply testing. An alternative might be a prompt such as "There's a lot going on and I think I'm a little lost, can you summarise where we have got to for me please?"

The faculty helper will need to know the clinical information needed for the simulation to feed it in appropriately to enable the candidate(s) to ensure a thorough ABCDE assessment is carried out. To facilitate this for each simulation you will have a small, laminated card with information about the simulation, and feedback about the condition and progress of the simulated patient. Only prompt the candidate if they need it. Most candidates will identify key treatment points from the clinical information provided by the faculty helper and monitors. As in previous editions of APLS, some candidates will require more clues to be able to progress through a scenario. In APLS 7e, these clues are provided from within the team by the faculty helper, in the form of prompts, rather than the lead instructor. Examples of prompts are provided for instructors to offer some guidance on strategies that may be used. It is not necessary to use all or any the prompts, and they are not intended as a script to be used in scenarios.

Situations when you might consider prompting:

- I'm sorry I got distracted; can we go back through the elements of the structured approach (when a candidate isn't making the ABCDE clear enough).
- I'm a bit confused at what's going on (when a candidate isn't communicating well or if they seem to be going off track to encourage them to pause and review)
- At any point you might declare a change in patient condition such as "they've gone quiet" or indicate a monitor reading to nudge the candidate towards a reassessment

The FH should do what they are directed to do by the TL.

The faculty helper can give information to the other team members to feed into the simulation when they attach monitoring/perform skills so that the faculty helper doesn't become the only person feeding back. It is important to involve the other team members so that they can be actively engaged and learn.

To allow for assessment of the candidate's knowledge and skills of the ABCDE assessment, the faculty helper will need to be careful not to prompt the candidate too early or to "over prompt". This is a balance between interacting in a way that helps the candidate get to the right answer themselves (enabling the candidate to "achieve") versus providing information in a much more obvious way that allows the candidate(s) to learn from the scenario (while being "not there yet"). In APLS 7e, the main responsibility for this has shifted from the lead instructor to the faculty helper. Other members of faculty should not prompt or provide feedback during the simulation. All faculty members should be alert to the consequences of being too slow or too quick with the helper prompts.

Team leader

The team leader must demonstrate their knowledge of the structure and the skills of the ABCDE assessment, and so the initial patient assessment will be started by the team leader, assisted by a candidate team member and the faculty helper.

The team leader should ensure that an initial assessment following the ABCDE structure with resuscitation is conducted. They should be allowed to do this in a manner consistent with their own job role. How this is practically done will depend on the type of scenario, with more detail provided in the relevant sections further on in this guide. The faculty helper will need to provide clinical information not obtainable from the mannequin or monitors, such as examination findings, when asked by the team leader. Other candidates should be brought into the scenario to be team members and assist in tasks as directed by the team leader. The faculty helper should be mindful not to allow other candidates to make up information or take over leadership unless it is appropriate to handover.

For example, a junior candidate can handover the 'lead' to a more senior member of the team once the initial assessment and resuscitation has been carried out and more help is available.

Assessment

We are assessing the candidates on the ABCDE assessment, team working, escalation, KTPs and their skills. Remember that we are still teaching as well as assessing their knowledge.

Skills

Candidates have had the opportunity to watch all the skills demonstrated online (and seen some of them demonstrated again during the simulation demo) and undertaken a previous APLS course so should be familiar with them. **All faculty** must also have watched the skills videos before the course so that they know what the candidates have been taught. The only 'assessed' skill is defibrillation. This is done within a skill station. Other skills will be observed as candidates participate and perform them in real time within the simulations.

Candidates should be given coaching during or after the simulation if they have not met the required standard for any core skill (e.g. BMV) and be given further opportunities during later simulations to

improve their skills, especially if they have not yet achieved a safe standard. Remember that we are just 'checking' their core skills and correcting, if necessary, rather than teaching them.

The core skills to observe and coach on if needed are:

- Airway opening manoeuvres.
- Oropharyngeal airway
- BVM ventilation
- IO access
- MILS and 20° tilt
- BLS infant and child
- Safe defibrillation with manual defibrillator

There will also be time during this part of the session for candidates to ask questions or for faculty (and candidates) to bring examples and suggestions from clinical practice.

In summary:

- Faculty lead instructor gives the initial candidate brief and 'manages' the simulation by controlling the patient and their observations through the patient monitoring system.
- Faculty helper participates as a team member (and can demonstrate skills in real time if needed). They have a card with simulation information and will give small prompts to the team lead and other team members about observations and changes in condition.
- The third faculty member in the room keeps an eye on the whole room and deals with any issues with IT/equipment that occur during the simulation and can be an additional team member particularly if a skill/role is required that is not within the candidate group. They may also be used for the handover at the end of the simulation.
- It is important that only the faculty helper feeds in information so that the candidate is not confused. If the FH is overwhelmed and unable to respond, then it is the responsibility of the lead instructor to bring in more help. The FH should make it clear that they are not able to do everything, and prompt for additional help if the TL does not request it. Remember it is important that the remaining candidate group are involved as much as possible.
- Faculty lead instructor terminates the simulation and facilitates the learning conversation. The faculty helper can be asked to be part of this learning conversation if necessary/helpful. They must not dominate.

Learning conversation

All faculty should re-familiarise themselves with how to have an effective learning conversation by reading 'Listening through the learning conversation: a thought-provoking intervention by Mike Davis and Kate Denning'. Remember that the key to a good learning conversation is letting the candidates jointly discuss and create their understanding of the event. **If you find you have done a lot of talking, then it is likely that they will have learnt less than you'd hoped.**

We recommend running illness sessions a little differently from cardiac and trauma, more detail is given below:

Illness simulation session

Initially you start the simulation with one TL and one FH. FH starts by giving clinical information, TM does tasks when asked (calls for help, gets equipment, gets access etc.) while TL and FH work

through initial assessment. Other team members can be brought in by FH (or lead instructor if FH unable to) as required. The helpers should be candidates not faculty to keep them engaged, learning and practising. It is the team leader's responsibility to ensure and direct an ABCDE assessment, they may be hands on. The purpose is to see that they can do the full primary survey. Too many helpers in the initial assessment get in the way of assessing the TL do the ABCDE. Please watch the illness video for an example of how to do this.

You would accept, for example, a nurse team leader asking a doctor to listen to the chest, but it is the nurse's responsibility as the TL to ask for it, to ensure it is done well, and to interpret the findings.

After the ABCDE further help can arrive, someone else *can* take over as with 6th edition. The TL should give a good SBAR at some point in the simulation. Once the initial assessment and resuscitation has been done, the scenario then becomes more of an extended teaching for the team than assessed element for the TL. If however, a candidate has not yet shown that they can do a good ABCDE assessment then it may be a good idea to get them to do a further reassessment or identify within the paperwork that they will need to re-do this in their second simulation.

Trauma simulation session

The TL should start with a full team and have time before the child arrives to allocate roles. Their team will include the FH who 'offers' to do the primary survey when roles are being allocated. The TL should still guide the primary survey (ABCDE) and the FH can facilitate this with prompts if clarification is needed.

The TL manages the information flow and the structure of the <c>ABCDE assessment. They request re-assessments following interventions, they suggest treatment and put a plan into action. The TL ensures that situation awareness is shared. The FH does the primary survey (and inputs findings). The candidate team carries out the other tasks e.g., c-spine control, haemorrhage control, putting on the monitoring, calling for further help. Please watch the trauma video for an example of how to do this.

However, the TL is less hands on than in the illness simulations, so should be encouraged to stand at the foot of the bed.

Cardiac simulation session

Set each simulation up with a TL, a FH and two other candidates to perform BLS until the full crash team arrive. The TL must retain full situation awareness throughout but tasks a team member to take charge of defib and team safety. It must be clear throughout these transitions who the team should be listening to.

All candidates will already have taken part and been assessed on this skill in the defibrillation skill station.

If there is a candidate who has been identified during their first simulation as needing further practice at the ABCDE assessment, then this can be done once ROSC has been achieved.

Before starting the afternoon cardiac simulations, faculty should confirm if necessary that candidates are comfortable in participating in the 'end of life/ACP' simulation (C3).

Guidance for running simulations

We have changed the way that we run scenarios on APLS 7e

Faculty: lead

Keeps a global overview
Gives the initial brief
Runs the tech to keep the scenario moving
Facilitates a LC, not a list

Faculty: helper

Helps from within the sim
Can prompt the TL
Needs to know the parameters

Faculty: paperwork

Acts as specialist e.g. for SBAR Fills in the paperwork
Deals with technical issues

The embedded faculty helper's job will be to act as a team member and to provide information from within the scenario to enable the candidates to manage the patient's care.

Encourage the team to interact with the embedded faculty helper from the outset.

Encourage the use of names and closed loop communication.

The lead instructor should bring additional candidates in as appropriate to an emergency situation and/or if the faculty helper is inundated and not able to respond to the TL.

Prompts may be necessary from the faculty helper if the candidate is not progressing with the scenario. It is a delicate balance between giving them time and prompting when necessary.

It is crucial that the faculty team are prepared and knowledgeable about each scenario and work very closely together to ensure that learning is always the key focus of each simulation with continuous assessment being an element.

Once the TL has completed the initial ABCDE they can either continue as team leader or hand over leadership as with 6e.

During the post simulation discussion lots of learning keeps on happening. There are some useful strategies you can use.

Move away from the manikin and sit in a circle to encourage everyone to join in.

Avoid using too many of your own anecdotes, use the candidates' experience instead.

The nominated lead instructor should facilitate the debrief. Other instructors should try not to get involved.

When one of the candidates asks a question, deflect it to the group rather than answering it yourself.

When you make a decision about a candidate's competence, you need to include an evaluation of the prompting or assistance that each individual needed, from both the faculty and the wider candidate group.

It is essential that during the debrief you give the candidates feedback on how they managed the patient. They should know by the end of the learning conversation whether they are working at the required standard or not.

The key learning is: ensures a structured ABCDE approach, effective team leadership and followership; putting a plan into place; escalation where appropriate; a good SBAR. These are your pass/fail criteria and are marked in bold on the simulations.

If you need to discuss with your colleagues in order to come to consensus about a candidate, make sure you let the candidate know about their progress as soon as possible after the session. Also be sure to record important comments on the progress log.

Finish with questions then summarise the key learning.