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Assessment

MRCP(UK) Part 2 Clinical Examination (PACES)

Examiners Guide

PACES23

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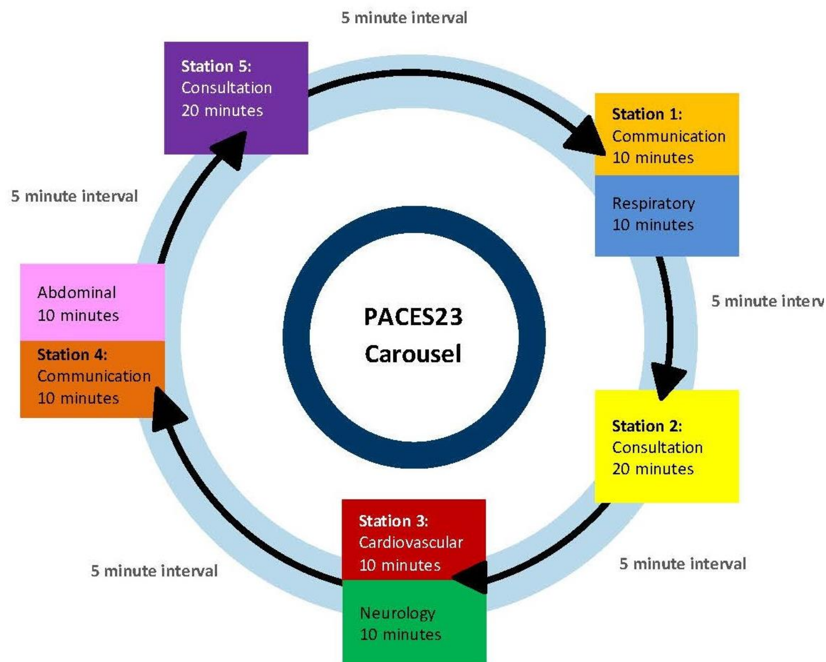
PACES examination

The Practical Assessment of Clinical Examination Skills (PACES) examination consists of five clinical assessment ‘Stations’ where a selection of core clinical skills are tested by pairs of examiners using an objective marking system. Real patients and simulated or surrogate patients may appear, and clinical skills are tested in the context of standardised problems set in a variety of systems and settings. Examiners work in pairs to set the standard for each case (‘calibration’) but mark each candidate without conferring. Each candidate is asked to demonstrate seven clinical skills, in eight patient encounters, and is assessed by a total of ten examiners.

Structure – the PACES cycle



- There are eight encounters across five 20-minute stations: a 10-minute communication encounter and a 10-minute physical examination encounter at Stations 1 and 4; two 10-minute physical examination encounters at Station 3; and two 20-minute clinical consultations, at Stations 2 and 5 (one case will be acute and one will be non-acute).
- Two examiners assess each candidate at each station.
- The passage of five candidates through the cycle of five stations is known as a cycle of PACES.
- Each examiner pair remains at the same station for the whole cycle.
- Five candidates each start the examination at a different station, candidates **must** then progress through the other stations in ascending order (1-5).
- In Station 1 and 4 the communication encounter (1a, 4a) must precede the clinical encounter (1b, 4b).
- Candidates will have 5 minutes to move between stations and read the scenario at Stations 1, 2, 4 and 5.
- The cycle of 5 stations takes 125 minutes to complete.

Patients and surrogates

- On the vast majority of occasions, patients with real physical signs take part in Stations 1b (Respiratory), 3 (Cardiovascular and Neurology) and Station 4b (Abdominal). Occasionally a patient with no physical signs participates to assess the ability to confidently detect normality.
- At Stations 1a and 4a (Communication) surrogate or simulated patients, who have learnt the scenario, take part.
- Patients participating in Station 2 and 5 have real physical signs on the majority of occasions. The patient may relate their own history, occasionally with some details modified to fit the scenario. On other occasions a surrogate may give the history on behalf of a patient who has physical signs. The candidate will take a history from the surrogate but examine the patient. A reserve scenario and (surrogate) patient should be available for use at all times.

Scenarios and introductors

- At Stations 1a and 4a (Communication), standardised clinical scenarios form the basis of the content of the encounter. These are produced to a standardised template and approved for use by the Scenario Editorial Committee of the Clinical Examining Board. Standardised scenarios are allocated for each examination and provided via the organising College. They will indicate the gender and age range for the surrogate, and should be used in line with the timetable provided. Amendments to any scenarios on the examination day should be rare and must be approved by the Chair of Examiners. A single scenario is normally used for both cycle 1 and 2 at each of these Stations but should be changed for cycle 3. It is not permissible to change a scenario within a cycle.
- **Communication Stations - Double cycles** – Where identical scenarios are used for the two cycles running concurrently. it is permissible for the gender and age of the two patients to be different as long as the changes are in line with the guide provided by the Scenario Editorial Committee of the Clinical Examining Board.
- At Stations 2 and 5 (Consultation), scenarios are generated in advance by the Host Examiner to suit locally available patients and presented on a standardised template. The Station 2 and 5 scenarios are vetted by the organising college, or, for international centres, by the Chair and Co-Chair of Examiners. Two scenarios (one for each of the Consultation encounters) are required per cycle, and DO NOT need be changed between cycles one and two. New scenarios should be used at cycle three. A reserve scenario and (surrogate) patient should be available for use at all times.
- **Consultation Stations – Double runs. It is permissible for** the same scenario to be used in matching stations that run concurrently. **The core part of the scenario must be identical** however specific details on the individual patient could be different. As an example, in one station the "patient" could be a male aged 72 and a widower while in the other the patient would also be male but aged 56 and married. It would not be possible to use the same basic scenario for AM and PM sessions as the core part of the scenario must be different.
- At Station 1b (Respiratory); Station 3 (Cardiovascular and Neurological) and Station 4b (Abdomen) short introductory statements ('introductors') are created by the Host Examiner and modified if necessary by the examiners leading the assessment at that encounter.
- The introductor should pose a question and not simply indicate the part of the physical examination required. For example, at the cardiovascular encounter, the introductor for a patient with mitral regurgitation and atrial fibrillation might read: 'This patient presented with palpitations. Please examine their cardiovascular system to establish a cause'.
- At Station 3 (Neurology) the introductory statement must point the candidate to the relevant part of the body. The introductor might read: This patient has been dropping small objects. Please examine the neurology of the upper limbs.
- Once the calibration process is complete the examiners may wish to alter the introductory statement. It is advisable that a PC and printer are available in order to produce the required statement quickly.

Examiners

- All examiners **must be** Fellows or Collegiate Members (in good standing) of at least one of the 3 Colleges' of Physicians.
- Examiners have all been subject to a standardised appointment and training process and, after appointment to one of the college examiner panels, can be asked to examine by any college at any of the three colleges' centres.
- All examiners must hold a current GMC licence to practice if working in the UK or equivalent if overseas.
- Examiners are encouraged to examine at least 2 days a year (averaged over 2 years)
- Examiners who have not examined in the previous 2 years must complete refresher training before examining again.
- Examiners should be familiar with, and adhere to, the MRCP(UK) Code of Conduct for PACES Examiners
- 11 examiners should be present at each cycle, 2 examining at each Station and one acting as the 11th examiner.
- The 11th examiner (usually the Host Examiner) is responsible for troubleshooting during the examination cycle, collating and checking the marksheets, compiling the Candidate Performance Summaries, collecting the scenario assessment forms and any confidential paperwork (e.g. scenarios). The Host Examiner frequently takes on this role.
- When only ten examiners are present, the 11th examiner role should be delegated to a senior administrator or member of the medical support staff to ensure that all the cycle administration tasks are undertaken efficiently and accurately.
- The Host Examiner is responsible for organising the facility and patients for the day. The Host Examiner should not be allocated to a Station during the morning cycles on the first day as they will usually take the role of 11th Examiner and should be available to address any last-minute problems.
- The Chair of Examiners is an examiner with extensive examining experience who is responsible for briefing examiners, chairing the post cycle meeting, supporting the host in the smooth delivery of the examination and the audit and quality control of examination delivery including checking that the marksheets have been correctly and fully completed.
- Trainee examiners may be present. These examiners will have applied for examiner status and will have been accepted for training by their college. They will undergo one day of training. Examiner training includes 'shadow' marking candidates over a minimum of 2 cycles (Stations 1 or 4 and Station 2 or 5) plus full participation in the briefing meetings, post cycle discussions and calibration process. Trainee examiners must always participate with the examiners in calibration of the physical examination and communication encounters at Stations 1 or 4, but may be briefed by the examiners on the agreed calibration criteria for the consultation encounter at Stations 2 or 5. Each trainee examiner will be supervised by a named examiner – usually the Chair of Examiners and one or more of the others.
- A trainee examiner, who has completed the preparation process and has been signed off by the Chair Examiner, may examine immediately on condition that the relevant College has allocated an examiner number.
- A trainee examiner who has been signed off as competent to examine but who has not officially examined within 4 years of being trained must re-train before examining.
- **Running a cycle with only 9 examiners is permitted but the 9 examiner protocol must be followed.**
- **IMPORTANT: the examination must be cancelled if there are 8 or fewer examiners available.**

Candidates

- Candidates taking the PACES examination may or may not be working in the country where they sit the examination. Many travel long distances simply to take the examination.
- All candidates will have already passed the Part 1 written examination within the previous seven years. Most will also have sat and passed the Part 2 written examination, although this is not mandatory before a PACES attempt.

PACES examining day

- Centres will examine 10-15 candidates per day in 2-3 examination cycles. Some will examine 10 candidates in 2 cycles. Some centres run two or three cycles concurrently, examining 20 (2 double cycles) or 30 (3 double cycles) candidates in a day.

Timings

- All examiners must be able to attend the examination at least one hour before the first candidate is due to start and be able to stay for at least half an hour after the end of the final cycle.
- All mobile phones and other electronic devices must be turned off during all periods of candidate assessment.
- Patients and examiner pairings should remain the same for the first two cycles, then change if there is a third cycle. The Host Examiner is responsible for letting examiners know their pairing for each cycle.
- Calibration is vital to the fair and consistent conduct of the examination and is necessary before any cycle in which two examiners will be working together for the first time that day or seeing a new patient or patients on that day. Typically, this means before the first and third cycles. If calibration is incomplete by the projected start time of any cycle, the examination must be delayed until all examiners are ready.
- Timings may vary if extended briefing, calibration or post-cycle meetings are required.
- Briefing meetings provide the Chair of Examiners and Host Examiner with an opportunity to update examiners on generic and local matters of importance to the conduct of the examination.
- Post-cycle meetings provide examiners with an opportunity to review and discuss the conduct of the cycle and overall performance of all candidates, as well as specific issues, such as candidates who are awarded two Unsatisfactory scores at Skill G and any other candidates recommended for enhanced feedback. Relevant candidate issues discussed at the post-cycle meetings must be documented on a PACES discussion sheet. All other issues that need to be recorded must be documented on the centre audit form and centre incident form (where applicable)
- Indicative timings for a centre running a three-cycle day and starting the first group of five candidates at 09.10 are shown below. An alternative two-cycle day with indicative timings for a later start is also shown.

2 CYCLE DAY: 10:15 START

Time	Activity	Comments
09.00 – 09.15	**Examiners arrive**	Check the time you have been asked to arrive.
09.15 – 09.30	**Briefing meeting**	The Chair of Examiners and host provide updates and reminders and highlight issues of local relevance.
09.30 – 10.15	**Examiner calibration**	If longer is required, the start of the examination should be delayed.
10:15	**First cycle starts**	The candidates will be at their start Station at 09.10 and enter the first Station at 09.15.
12.20	**First cycle ends**	
12:20 - 13:20	**Examiner lunch and post-cycle meeting**	Patients and examiner pairings do not change, therefore further calibration is not required. Candidate performance is discussed.
13:20	**Second cycle starts**	The candidates will be at their start Station at 11.40 and enter the first Station at 11.45.
15:25 **15:25 – 15:55**	**Second cycle ends** **Post-cycle meeting**	
15:55	**Examination ends**	

3 CYCLE DAY: 09.10 START

Time	Activity	Comments
08.00 – 08.15	**Examiners arrive**	Check the time you have been asked to arrive.
08.15 – 08.30	**Briefing meeting**	The Chair of Examiners and host provide updates and reminders and highlight issues of local relevance.
08.30 – 09.10	**Examiner calibration**	If longer is required, the start of the examination should be delayed.
09.10	**First cycle starts**	The candidates will be at their start Station at 09.10 and enter the first Station at 09.15.
11.15	**First cycle ends**	
11.15 – 11.40	**Examiner coffee and post-cycle meeting**	Patients and examiner pairings do not change, therefore further calibration is not required. Candidate performance is discussed.
11.40	**Second cycle starts**	The candidates will be at their start Station at 11.40 and enter the first Station at 11.45.
13.45	**Second cycle ends**	
13.45 – 14.55	**Examiner lunch, post-cycle meeting and calibration**	If longer is required, the start of the examination should be delayed.
14.55	**Third cycle starts**	The candidates will be at their start Station at 14.55 and enter the first Station at 15.00.
17.00	**Third cycle ends**	
17.00 – 17.30	**Post-cycle meeting**	
17.30	**Examination ends**	

Consult the documents sent to you by the organising college or team for precise timings for your examining day. Examiner pairings and station allocation will usually be included in these documents.

Conduct of the assessment

Calibration

- Examiner pairs must have time to review and discuss the patients participating in the assessment. This process, known as calibration, is essentially a standard setting process, and is critical to the fair and consistent conduct of the assessment.
- The calibration process takes at least 30–40 minutes and must always be completed before the examination starts.
- It is recommended that examiners at Stations 1b (Respiratory), 3 (Cardiovascular and Neurology) and 4b (Abdomen) see and examine patients alone, ideally without first reviewing the clinical information provided, thus seeing the case from the candidates' perspective. Candidates should be judged on their ability to detect what an examiner detects and make diagnoses that an examiner would make.
- The physical signs present/absent MUST be agreed by the examiners during the pre-cycle calibration process.
- The calibration discussion should focus on agreeing the clinical signs or symptoms and considering together what specific criteria will be used to judge whether the candidate can be awarded a Satisfactory mark in each of the skills assessed. Calibration should also consider the possible signs which a candidate may "invent" and how this should influence marking.
- Calibrate on all the skills assessed at the encounter.
- Examiners must agree the 'brief description of the case' that should be entered into the appropriate part of their marksheets. This will reduce the potential for confusion among candidates who ask to review their own marksheets after sitting the examination.
- The standard for candidates in PACES is set at:- ***Level 3 (entrusted to act with indirect supervision)*** as per the new Internal Medicine Curriculum.
- In addition to checking physical signs, take time to ensure that patients understand what will happen during the examination and that they know they will have the opportunity after each candidate leaves to clarify anything a candidate may have erroneously stated about their condition or problem.
- Position and expose the patient in a way that will help the candidate, and ensure the introductory statement provided directs the candidate appropriately. If the statement requires clarification, ask an administrator to have it changed.
- At Stations 1a and 4a (Communication), the surrogate must be rehearsed; it is suggested that one of the examiners takes the role of the candidate, and specific aspects of the scenario which require clarification or emphasis are discussed. Specific questions the surrogate is required to ask the candidate should be clarified.
- The patients/surrogates should be briefed to answer all the candidates' questions as accurately and consistently as they can. They should be advised not to withhold information but also not to volunteer information that has not been sought by the candidate.
- Examiners at Station 2 and 5 should ensure that the problem described in each scenario is focused and clear and that each of the tasks set can feasibly be completed by a competent candidate in the fifteen minutes available.
- Examiners must rehearse the history, check the physical signs, and consider the important aspects of communication, as part of their calibration.
- Examiners should agree which parts of the physical examination they feel the candidate should undertake, and which parts they will instruct the candidate not to undertake should they volunteer to do so. They should ensure that the patient or surrogate is prepared to ask the candidate one or two questions, and clearly understands the scenario if it varies from their own clinical history. The requirements to pass each of the seven skills should be agreed by both examiners.
- Where an encounter raises an issue subject to legal or other national guidance, for example NICE guidelines or driving restrictions, the examiners must agree what it is reasonable that candidates, who may not live and work in the UK, should be aware of.

Marksheets

- Candidates carry their marksheets with them throughout the examination.
- There are a total of 16 marksheets for each candidate.
- When a candidate arrives outside a Station, one of the examiners, or delegated member of the support staff should collect the relevant marksheets for that Station.
- For double running cycles examiners must ensure they have been handed the marksheets for the correct candidate e.g., if examining in the blue cycle the marksheets should NOT BE for a candidate allocated to the red cycle.
- During the candidate reading time each examiner must complete examiner initials, examiner number and description of the case, so that the candidate receives full attention during the encounter.
- Examiners should ensure they record the same agreed case descriptor on their marksheets.
- There should be minimal disruption to the candidate during the reading of scenarios at Stations 1,2, 4 and 5.
- The candidate should have completed their own details and the centre details before the cycle starts. If not, draw this to the attention of the 11th examiner.
- In Station 3 the examiners should double check that they are filling in the correct marksheet at each encounter. The marksheets are colour coded to help.
- In stations 1, 2, 4 and 5 examiners should copy the relevant scenario number on to the marksheet, making sure to fill in all four columns.
- Use only the pencils provided to complete the marksheets.
- The sheets are optically scanned and must never be creased or folded.
- Examiners should ensure their writing is legible and written within the relevant boxes. Marksheets may need to be copied for internal use in the event of enhanced feedback, appeals or complaints. Candidates can request to see copies of their marksheets. Block capitals aid legibility.
- Examiners should ensure that their comments are phrased in a professional manner.
- Examiners should not write or in any way mark the bar coded areas on the right hand side and bottom of the marksheet.

Lead Examiner

- One examiner should assume the lead role with each candidate, introducing the case and leading the questioning. The other examiner observes the candidate: patient encounter and listens to the Lead Examiner's questions and the candidate's responses. The roles are then reversed. If an examiner is not taking the lead on a case, as a co-examiner he/she must be present and visible to the candidate at all times. In the event of any appeal, co-examiner observations and comments are invaluable.

- Each examiner should complete the relevant 'Did you lead' box on the marksheet.
- At Stations 1b (Respiratory), 3 (Cardiovascular and Neurology) 4b (Abdomen) each examiner in turn leads the candidate for each 10-minute encounter. At Station 2 & 5, each examiner in turn leads the candidate for each 15-minute encounter.

Summary of timings at each Station

- The start and finish of each 20 minute period is clearly signalled by a bell or equivalent.
- The host centre will provide hand held clocks at each Station. Examiners must take responsibility for timing the interactions within each Station and encounter. The Host Examiner's team may be able to offer additional help with signals at pre-agreed times – this should be clarified before the cycle starts and the signals should be sufficiently different to the Station start/finish 'bell' to avoid confusion.
- Within each Station, and at each encounter, the following timings apply to the amount of time that the candidate should spend with the patient and examiner.
- It is usual for examiners to inform candidates of the passage of time during each encounter, by providing time warnings ('You have x minutes left') at the time indicated.
- Any deviations to the set timings must be reported to the host and Chair for inclusion in the Centre Audit Form.

Stn	Encounter	Time for Candidate /Patient Interaction (minutes)	Time for Candidate/ Examiner Interaction (minutes)	Examiner gives warning time at (minutes)	Comment
1	Communication	10	n/a	8	No examiner/ candidate interaction
1	Respiratory	6	4	5	If a candidate indicates they are finished before 6 minutes elapse, questioning may start
2	Consultation	15	5	13	The full 15 minutes must pass before questioning may start
3	Cardiovascular	6	4	5	If a candidate indicates they are finished before 6 minutes elapse, questioning may start.
3	Neurology	6	4	5	If a candidate indicates they are finished before 6 minutes elapse, questioning may start.
4	Communication	10	n/a	8	No examiner/ candidate interaction
4	Abdominal	6	4	5	If a candidate indicates they are finished before 6 minutes elapse, questioning may start
5	Consultation	15	5	13	The full 15 minutes must pass before questioning may start

The candidate: patient interaction

- After initial introductions and directing the candidate to the appropriate patient and case introductor, examiners should not interrupt or direct the candidate during their clinical examination unless it is evident that the candidate needs guidance on how to proceed, or the candidate is causing the patient discomfort.
- The examiners' role during this time is to observe the candidate's interaction with the patient closely and award marks for those skills that can be assessed by observation alone, based on the marksheet guidance and the criteria agreed for each case during calibration.
- Stations 1a and 4a (Communication), 2 and 5 (Consultation): if the candidate finishes before the time available, the Lead Examiner should remind the candidate how much time is left, and tell them that they can ask more questions of the patient or surrogate if they wish. In Stations 2 and 5 (Consultation) The full time allocated (see table above) must pass before questioning can start, even if it is spent in silence.

- Station 1b (Respiratory) and 4b (Abdominal), and Station 3: if the candidate finishes before six minutes has elapsed, the Lead Examiner should let the candidate know that time is left but, if they then confirm that they have finished their examination, questioning may begin.

The candidate: examiner interaction

- When the questioning period commences, the lead examiner begins the discussion with the candidate.
- Discussion should primarily cover the skills to be assessed at this encounter which cannot be assessed by direct observation alone. It is essential that all skills on the marksheet are adequately assessed.
- When the bell sounds, questioning must stop immediately. The candidate should wash their hands, be given any equipment they have brought in, and ushered out of the Station. Examiners should try to avoid making any physical contact with the candidate, for example, putting a hand on their shoulder to guide them from one patient to another.
- The candidate should never be asked questions by both examiners simultaneously. It is only permissible for the non-lead examiner to interact with the candidate if they have not heard something that has been said, if they believe the candidate is causing the patient discomfort or if the Lead Examiner indicates that they have no further questions to ask.
- Examiners should avoid saying anything to the candidate that could be interpreted as either encouragement or criticism.
- There is no candidate/examiner interaction in Stations 1a and 4a (Communication).

After the candidate leaves

- Marking should be conducted independently.
- It is only permissible for examiners to discuss a candidate's performance before the marksheets are completed if they need to clarify what a candidate actually did or said, or if an issue relating to patient welfare (Skill G) is thought to have occurred.
- It is acceptable for examiners to compare marks and discuss a candidate after the marksheets have been handed in, but they should ensure that they only do so out of earshot of patients, staff and other candidates.
- If an issue relating to performance in Skill G arises, examiners must also discuss this at the post- cycle meeting and ensure that a Candidate Discussion Sheet is completed in relation to the candidate.
- At the end of each Station, once examiners have completed their marksheets, the marksheets should be placed in the designated box or handed directly to an administrator. The marksheets will be checked for completeness by the 11th Examiner. The 11th Examiner will return incomplete marksheets to examiners for completion as soon as any omission is identified.

Candidates known to examiners

- The colleges consider that examiners are capable of assessing any candidate in the examination fairly, consistently and without prejudice.
- However, if an examiner becomes aware, before the examination day, that a relative is due to be examined in a centre where they will be acting as an examiner, they must notify the organising college.
- It is not permissible to show a list of candidates to the examiners (or vice versa) before the examination day.
- Examiners may encounter candidates who have worked with them previously. In this situation, it is permissible for the examiner to assess the candidate.
- If any examiner believes that foreknowledge of a candidate might compromise their ability to assess the candidate fairly or would prefer not to examine a candidate for any reason, they should indicate this to the 11th Examiner, who will step in as a substitute examiner.

Patients known to candidates

- On rare occasions, a candidate may have examined a patient before, for instance during training or a PACES preparation course. Candidates are required to inform the examiners at the Station if they have met the patient before.
- Where possible, candidates declaring that they know a patient should be directed to another patient at that Station.

- If this is not possible, examiners should take the candidate's prior knowledge of the patient into account in their marking.
- On no account must the candidate be prevented from completing the examination if they declare that they know a patient.

Detailed conduct of each Station

Communication Encounters (Stations 1a and 4a)

- The Communication section of Stations 1 and 4 **MUST ALWAYS** run before the clinical section.
- As soon as the candidate is in position at Stations 1 and 4, they must be given the candidate information section of the scenario to read. It is the responsibility of the staff administering the cycle to ensure that this occurs efficiently.
- A second copy of the candidate information section of the scenario should also be in the examination room, to which candidates can refer.
- Candidates may make notes on the blank paper provided, and may take these into the Station and refer to them at any point that they wish. These notes should be left in the station and securely destroyed at the end of the examination; they do not form any part of the assessment.
- At the bell, one of the examiners should invite the candidate into the room, ensuring that the candidate brings their notes with them but leaves the scenario outside (for the next candidate). They should introduce themselves, the other examiner and the surrogate, remind the candidate of the Station timings and ask them to start.
- The patient/candidate interaction will involve communication skills.
- Examiners should keep track of the time and it is good practice to advise the candidate that there are two minutes remaining after 8 minutes has elapsed.
- If the candidate appears to have finished early, either before the 8 minute reminder or between then and full time at 10 minutes, remind them how long is left at the Station and enquire if there is anything else they would like to ask, or whether they have finished. If they indicate they have finished, the examiners and the surrogate must sit in silence until the full 10 minutes has elapsed. However, if the candidate, at any time within the 10 minutes, wishes to communicate further with the surrogate, they may do so. The surrogate must remain in the station until the end of the 10 minute period.
- At 10 minutes, a member of the organising team, and/or the examiners themselves, will indicate that the communication section has finished and that the examiners and candidate should move on to the clinical case.

Station 1b (Respiratory) and Station 4b (Abdominal)

- At the 10 minute signal, one of the examiners will invite the candidate into the relevant clinical area and show the candidate the written introductor for the appropriate case. This must pose a problem for the candidate and delineate what examination is necessary. For example: 'This patient has been progressively breathless for three years. Please examine the respiratory system to establish the likely cause'.
- Examiners should keep the time with the clocks provided. It is good practice to warn the candidate that they have one minute to complete their examination after five minutes has elapsed.
- At six minutes, one of the examiners should ask the candidate to finish their examination, and commence questioning.
- If a candidate appears to finish their examination of a patient before the full six minutes have elapsed, the examiner should confirm that the candidate has indeed finished. If they indicate that they have finished, questioning may commence. If they wish to repeat any aspect of the examination, they may.
- At the end of ten minutes the examiner who is keeping time and/or a timekeeper from the host team should signal the end of the encounter. The examiner must stop questioning the candidate immediately.
- The examiners should offer candidates the chance to wash their hands.
- The candidate will leave the Station and be directed to the next Station.

Consultation Encounters (Station 2 and 5):

- As soon as the candidate is in position at Station 2 or 5, they must be given the candidate information section of the scenario to read. It is the responsibility of the staff administering the cycle to ensure that this occurs efficiently.
- A second copy of the candidate information section of the scenario should also be in the examination room, to which candidates can refer.
- Candidates may make notes on the blank paper provided and may take these into the Station and refer to them at any point that they wish. These notes should be left in the Station and securely destroyed at the end of the examination; they do not form any part of the assessment.
- At the bell, one of the examiners should invite the candidate into the room, ensuring that the candidate brings their notes with them but leaves the scenario outside (for the next candidate). They should introduce themselves, the other examiner and the patient/surrogate, remind the candidate of the Station timings and ask them to start.
- Examiners should keep their own time and it is good practice to warn the candidate that they have two minutes left after thirteen minutes has elapsed. At fifteen minutes, the Lead Examiner should end the candidate/patient interaction and commence questioning.
- After twenty minutes the bell will sound for the end of the Station.

Station 3: Cardiovascular and Neurology

- In order to reduce uncertainty and stress for candidates and to help further standardise the exam the default sequence of encounters in Station 3 will be Cardiovascular followed by Neurology. There will be a requirement to inform candidates during the preceding 5-minute sitting period if the order is to be reversed for any reason. Failure to do so would constitute a procedural irregularity and hence be a potential ground for a successful appeal. If the neurology encounter is examined before the cardiovascular one then this must be recorded as a comment on the mark sheet together with confirmation that the candidate was informed during the pre-station sitting period.
- At the bell, one of the examiners will invite the candidate into the room, introduce themselves and their co-examiner, and show the candidate the written introductor for the relevant case. This must pose a problem for the candidate and delineate what examination is necessary. For example: 'This patient has been progressively breathless for three years. Please examine the cardiovascular system to establish the likely cause'.
- Examiners should keep the time with the clocks provided. It is good practice to warn the candidate that they have one minute to complete their examination after five minutes has elapsed.
- At six minutes, one of the examiners should ask the candidate to finish their examination, and commence questioning.
- If a candidate appears to finish their examination of a patient before the full six minutes have elapsed, the examiner should confirm that the candidate has indeed finished and questioning may commence. If they wish to repeat any aspect of the examination, they may.
- At the end of ten minutes the examiner who is keeping time and/or a timekeeper from the host team should signal the end of the encounter. The examiners should offer candidates the chance to wash their hands.
- The second examiner in Station 3 will then show the candidate the written instructions for the second case and examination at the second encounter will commence.
- The timing of this encounter is identical to that of the first encounter. After ten minutes the bell will sound to end the second encounter and the Station. The examiners and the candidate must stop immediately. The examiners should again offer candidates the chance to wash their hands.
- The candidate will leave the Station and be directed to the next Station.
- This format and these timings must be followed. Each candidate must see only one patient per system.

Mark Sheets

https://www.thefederation.uk/examinations/paces/marksheets

Method of assessment
Seven core clinical skills are assessed in the PACES examination.

	Clinical Skill	Skill Descriptor
A	**Physical Examination**	Demonstrate correct, thorough, systematic (or focused in the Consultation encounters), appropriate, fluent and professional technique of physical examination.
B	**Identifying Physical Signs**	Identify physical signs correctly and do not find physical signs that are not present.
C	**Clinical Communication**	Elicit a clinical history relevant to the patient's complaints, in a systematic, thorough, fluent and professional manner. Explains clinical information and management options in a clear, structured, comprehensive, empathic and professional manner. Assesses impact of symptoms and identifies patient's preferred management options.
D	**Differential Diagnosis**	Constructs a sensible differential diagnosis for a patient that the candidate has personally clinically assessed and includes the correct diagnosis.
E	**Clinical Judgement**	Select or negotiate a sensible and appropriate management plan for a patient, relative or clinical situation. Applies appropriate and accurate clinical knowledge to determine a sensible and relevant management plan, including a timescale for this specific clinical situation.
F	**Managing Patients' Concerns**	Seek, detect, acknowledge and address patient or relatives' concerns. Seeks, detects, acknowledges and addresses patient's or relatives' specific questions or concerns in an empathetic manner. Demonstrates active listening and confirms patient's or relative's understanding.
G	**Maintaining Patient Welfare**	Treat a patient or relative respectfully and sensitively and in a manner that ensures their comfort, safety and dignity.

Different combinations of skills are assessed at each encounter. Examiners will usually find it easier to assess some skills during the candidate/patient interaction and others during the candidate/examiner interaction. This table shows which skills are assessed at each encounter and at what point each may be most easily assessed.

Encounter	Skills Assessed	Mainly assessed during candidate:	
		patient interaction	examiner interaction
Respiratory, Abdominal, Cardiovascular, Neurological	A, B, D, E, G	A, G	B, D, E
Communication	C, E, F, G	C, F, G	N/A
Consultation	A, B, C, D ,E ,F ,G	A, C, F, G	B, D, E

- Examiners may also use the five minutes between candidates to consider their judgements for each skill assessed in more detail but should not confer with their co-examiner unless they wish to clarify what a candidate did or said, or if an issue relating to patient welfare (Skill G) may have occurred.
- Examiners must assess each separate skill using a three-point scale of Satisfactory, Borderline and Unsatisfactory.
- The appropriate lozenge for each skill on the marksheet must be shaded using the supplied pencil.
- It is essential that all marksheets should be complete, legible, and unambiguous.
- General guidance regarding what constitutes a Satisfactory or Unsatisfactory performance at each skill is found on the marksheets. These marksheet skill descriptors are intended to support examiner judgement but should not be seen as absolute criteria. That is, a candidate need not meet all the criteria noted under Satisfactory to be awarded a Satisfactory judgement.
- Detailed definition of what will constitute a Satisfactory or Unsatisfactory performance for each skill in a particular encounter is decided by individual examiner pairs during the calibration process and recorded on the calibration sheets.
- For each assessed skill, examiners should agree what they expect a competent candidate to do, find or say. If a candidate meets their requirement for a given skill, they should be awarded a Satisfactory judgement for that skill.

Not tested

- The onus is on the candidate to demonstrate each of the skills noted on the marksheet for each encounter. Any untested skill will be regarded as not demonstrated and be equivalent in the marking system to an Unsatisfactory award (0 marks).
- If an examiner feels any skill was not tested, they should shade the Unsatisfactory lozenge and write NT in the comments box.
- Examiners must manage the questioning time available to assess each of the skills appropriate to that encounter. In particular, care should be taken to assess Skill E (Clinical Judgement), at Stations 1b (Respiratory), 3 (Cardiovascular and Neurology) and 4b (Abdomen). Examiners should note that assessment of this skill is based on a candidate's application of clinical knowledge to the case. This need not be limited to a discussion of investigation and management; for instance, the skill can be assessed in relation to the discussion of the understanding of signs or diagnosis that has taken place.

Borderline judgements

- The Borderline judgement should be considered if it is felt that the candidate has not fully demonstrated the skill, but the examiner feels some credit should be given for the skill or knowledge demonstrated, or where 'linked skills marking' applies – see below.

Linked skills marking

Please note this guidance applies **only to the clinical examination encounters in stations 1, 3 and 4, but not to the Consultation stations 2 and 5** as in the consultation encounters the diagnosis may be determined by the history alone or in combination with physical signs.

The words emphasised **in bold i**n the bullet points below do allow for some discretion by examiners and as such the guidance should be applied flexibly taking account of the individual case and candidate performance.

- Candidates are assessed on the patients they encounter in the examination and not on their knowledge of hypothetical patients with similar conditions.
- Examiners should base their questioning of the candidate around the clinical problem or questions posed in the case introductor or scenario.
- If the criteria for the award of a Satisfactory mark for Identifying Physical Signs (Skill B) are not met, it is **unlikely** that the criteria for award of a Satisfactory mark for Differential Diagnosis (Skill D) or for Clinical Judgement (Skill E) will be met.
- As such, **in most cases** in which the candidate fails to meet the examiners' criteria for Identifying Physical Signs (Skill B), and receives an Unsatisfactory award for this skill, further Unsatisfactory awards will follow for Differential Diagnosis (Skill D) and Clinical Judgement (Skill E).
- However, should a candidate demonstrate good knowledge and judgement in constructing a differential diagnosis or discussing management, when their initial findings have been partially correct, **credit may be awarded**, usually in the form of a Borderline judgement, for either Skill D (Differential Diagnosis) and/or Skill E (Clinical Judgement).
- It is permissible for examiners to bring the candidate back to the correct diagnosis during the discussion of patient management (particularly if the candidate has included the correct diagnosis in the differential or suggests investigations which would lead them to the correct diagnosis) but examiners should not correct candidates regarding physical signs before a discussion of differential diagnosis has taken place.

Comments

- Make any notes on the candidate's performance in the space provided on the marksheets (continue on the reverse side if necessary). Avoid writing across the bar code areas. Take care that candidates cannot see the comments or the marks that have been awarded. Always make comments if the mark is anything other than a Satisfactory judgement for any skill.

Enhanced Feedback

- If an examiner feels that the candidate's overall performance, or any aspect of their performance, has been very poor, and that the candidate should not re-sit the examination in the event of failure without receiving structured feedback regarding their performance, they should mark the 'enhanced feedback' box. This box should also be shaded in all instances of physical or verbal 'roughness'.
- Candidates felt to merit this additional level of feedback by one or more examiners must be discussed at the post-cycle meeting. The group of examiners, led by the Chair, should then make a decision about the need to make a formal written recommendation for enhanced feedback to the Clinical Examining Board (CEB). For those candidates recommended for enhanced feedback a Candidate Discussion sheet should always be completed.

Skill G

- If a candidate displays significantly inappropriate or unprofessional behaviour to a patient or relative, that may include rudeness, disrespect of the patient/relative's situation or feelings, and/or physical roughness during the clinical examination, which causes obvious discomfort, this should be assessed within Skill G (Maintaining Patient Welfare).
- Examiners should mark the candidate throughout the encounter without consulting each other, as usual, but if either examiner believes a candidate is causing significant discomfort they should point this out to the candidate. In extreme circumstances the examiner can stop the assessment.
- If, at the end of the candidate's assessment, either examiner considers that the candidate may have been physically or verbally rough and feels the award of an Unsatisfactory mark for Skill G to be appropriate, they should identify this to their fellow examiner when the candidate leaves and discuss this specific point. They may also wish to consult the patient.
- If the individual examiners do not agree that significantly unprofessional behaviour occurred, they should simply record their own individual marks for Skill G, again with comments if they have awarded anything other than a Satisfactory judgement.
- If both examiners working as a pair agree that the candidate has displayed significantly unprofessional behaviour, then they must both award an Unsatisfactory judgement for Skill G and shade the enhanced feedback box on each of the marksheets. Detailed comments to justify the award must be written on the marksheets, and the issue must be discussed by the examiner group at the post-cycle meeting and subsequently recorded on a Candidate Discussion sheet.
- At the post cycle meeting, any candidate scoring 29 marks or more for Skill G need not be discussed, as they will have passed this skill.
- All candidates with a score of 28 or less marks for Skill G, irrespective of how that total has been reached, should be discussed by the examiner group.
- The examiner group, led by the Chair, should arrive at a conclusion regarding the gravity of the issues that led to the score of 28 or less, and must make a recommendation to the CEB as to whether they feel the candidate should fail outright on the basis of the Skill G mark. The CEB will have the final decision on the pass/fail status of a candidate in this situation.

Verbal roughness

- Verbal roughness is a serious failure to live up to one or more aspects of the GMC standards of communication.
- It may include an inappropriately raised voice, rude or insulting behaviour or dismissal of a patient's complaints.
- If during the exam, an examiner believes that a candidate has been 'verbally rough' with a patient/surrogate/relative, they should confer with their co-examiner, and the surrogate if felt

necessary, before awarding their marks. The surrogate may confirm that, for example, they felt dismissed, bullied, had not been listened to, or misrepresented.

- If both examiners agree that there has been Verbal Roughness, they must:
    - each award an Unsatisfactory mark for Skill G
    - each tick the enhanced feedback box on their own marksheet, and
    - raise the issue at the post-cycle meeting.
- The Chair of Examiners will then lead a discussion with the examiner group regarding the incident and make a pass/fail recommendation to the CEB.

Patient safety

- Patient management is assessed under Skill E (Clinical Judgement) and clearly inappropriate suggestions regarding investigation or treatment would result in an Unsatisfactory award for this skill.
- Rarely, a candidate may suggest a course of action (investigation or treatment) during their discussion of patient management that, if enacted in real life, would seriously endanger patient safety.
- In those rare cases when an examiner feels that a candidate is adamant and persistent in pursuing a particular course of action, and that such an action would jeopardise the safety of the patient in real life, the examiner has the additional option of awarding an Unsatisfactory mark for this under Skill G.
- Examiners should manage this situation in the same manner as described above for unprofessional behaviour. Once the candidate leaves, they should discuss the issue with their co-examiner. If they agree that the candidate's performance did raise serious concerns regarding patient safety, both should award Unsatisfactory judgements for Skill G, shade the enhanced feedback box on each marksheet and raise the issue at the post-cycle meeting.

Pass standard

- A total of 84 different judgements are recorded on the marksheets.
- Each judgement receives marks as follows: Satisfactory = 2 marks; Borderline = 1 mark; Unsatisfactory= 0 marks.
- The marks awarded on all 16 marksheets are summed to produce the candidate's total test score.
- The marks awarded for each of the seven Skills (A–G) are separately summed to create seven Skill score totals.
- The maximum for the total test score is 168 and the minimum zero. The maximum scores for the seven Skills vary according to the frequency with which each Skill is assessed. The minimum score for each of these Skills is zero.
- Pass marks for each Skill and the examination overall have been set by the CEB and are reviewed regularly, and if necessary amended.
- All marks presented at the post-cycle meeting and decisions regarding overall pass or fail status of individual candidates are absolutely confidential. No examiner or member of support staff should divulge any details of candidates' marks.

Feedback and enhanced feedback

- All candidates who attempt PACES receive the total of their marks by Skill and encounter. This routinely returned information ('feedback') enables candidates to see not only the encounters at which they performed poorly, but also any skills where they consistently underperformed. In the majority of cases this should support candidate preparation for further attempts. Candidates are encouraged to share this information with their current educational supervisor or those who sponsored them to sit on this occasion.
- However, the three Colleges place great importance on providing guidance to those candidates whose conduct during the PACES examination causes concern to the examiners or who perform very poorly. As such, the examiner group should attempt to identify any candidate who requires additional information regarding their performance. This additional information is known as 'enhanced feedback'.
- Such enhanced feedback takes the form of a structured letter compiled from the handwritten comments made by examiners on marksheets. Those candidates who are identified for enhanced feedback will be contacted by their college of entry (or MRCP(UK) for candidates sitting internationally). Appropriate guidance and advice will then be given based on the marksheet comments.

- After each examination cycle the performance of each candidate will be reviewed and discussed. Candidates meeting the following criteria will be discussed, and recorded by the Chair of Examiners on the PACES Discussion Sheet:
    - Any candidate scoring 28 or less for Maintaining Patient Welfare (Skill G).
    - Any candidate who has performed exceptionally poorly (failed 6 or more skills).
    - Any candidate recorded as being (physically or verbally) rough with a patient/surrogate/relative.
    - Other – if none of the above criteria have been met but examiners still feel that enhanced feedback would be of benefit to the candidate, for example, due to a very low score for one particular Skill.

- Note that examiners are not encouraged to recommend enhanced feedback if a candidate is just generally poor. The multiple areas of deficiency will be evident to such individuals from the information on performance which is automatically provided to all candidates. They can request that copies of their marksheets are sent to them if they wish more detailed information.
- The comments on the marksheets should clearly state the reasons for enhanced feedback. The name and appropriate feedback for each of those candidates who fulfil the criteria should then be entered on the Discussion Sheet by the Host or Chair of Examiners and this should be returned to the College Examinations Department on completion of the examination. A separate Discussion Sheet should be completed for each candidate recommended for enhanced feedback.
- Examiners should be aware that candidates who are not identified by a group of examiners, or the CEB, as requiring enhanced feedback, can request to see their marksheets. In this event, they are sent copies of the marksheets with a standardised covering letter.
- Only candidates recorded on a Discussion Sheet will receive an enhanced feedback letter.