YEAR 1 CLINICAL CONTACT IN PRIMARY CARE SESSION
Thursday 13th February 2025 – am or pm – group A
Themes: Respiratory
Consultation skill: gathering information and formulating

Session plan		**Suggested timings: AM**	**PM**
Introduction	20 min	09.00-09.20	14.00-14.20
Patient contact	1 hr. 10 min	09:20-10.30	14.20-15.30
10-minute break			
Debrief and discussion Skills practice (20-30 min)	1hr 10 min	10.40 – 11.50	15.40 – 16.50
Close	10 min	11:50 – 12.00	16:50 – 17.00

The busy GP teacher will find all you need to know for the session in the first two pages. The format is the same as the previous session again with **the addition of skills practice**. Please use this plan in conjunction with the GP teacher guide here. The appendix below contains information extracted from the students' digital notebook (OneNote) and resources to enable you to help the students make links between the patients they see and their learning at the university.
Please help these students to think about gathering a history in primary care, including finding out the patient's agenda and their ideas, concerns, and expectations. Please also consider with the students how we examine patients, and address and manage risk factors for heart and respiratory diseases.
The main consultation skill focus is **"formulating"** – thinking about the information they (or you) have gathered from a patient and what it might mean. As a minimum, please look at the mnemonic for formulating — STOP!4WHAT? on page 3 as the students will have practiced this thought process in their EC labs.
Please also allocate 20-30 minutes for students to practise examination of the cardiovascular system, and consider with them how we can remotely examine patients, and address and manage risk factors for heart and respiratory diseases.
Timings are approximate and flexible. Most important is patient contact with subsequent discussion and reflection.
Patient contact ideally involves a mix of students observing/participating in consultations and meeting patients, in their own homes where possible. Please use your own clinical experiences to feed into the discussion. It doesn't matter if you don't cover everything, relevant alternative discussions or activities are fine.

Any problems on the day, please email phc-teaching@bristol.ac.uk or call 0117 4282987.

Central University teaching context

Case-based learning focuses on a medical student who is breathless when running. She smokes and would like to stop. Also, an older woman who has smoked 5 cigarettes/day for 30 years and becomes suddenly breathless associated with anxiety. She is taken to the ED and after investigation a panic attack is diagnosed.
In **effective consulting labs,** the focus is on gathering information and how that supports reaching a diagnosis and proposing a management plan. The focus is on the process: preparing, opening, gathering, formulating. The students role-play a medical student in GP, with a simulated patient.

Learning objectives

By the end of the session, students will be able to:

- Practise gathering information from a patient building on skills of active listening
- Describe the structure and components of a medical history and the clinical examination
- Describe the importance of developing an evidence based, patient-centred clinical formulation
- Practise formulating a hypothesis drawing on gathered building on skills of active listening
- Practise presenting clinical information in a coherent structure
- Describe the importance of eliciting the patient's understanding and agenda and how the patients' ideas, concerns and expectations inform our formulation of clinical problems
- Describe the risk factors for cardio-resp disease and the role of the clinician in health improvement/illness prevention
- Carry out a respiratory examination

GP advance preparation

Read this guide: arrange a patient with a current or past respiratory condition to meet with half the students (at home or in the surgery).

Arrange a short surgery (3/4 patients) for the others to observe. These consultations do not have to be respiratory.

Welcome, catch-up and introduction (20 min) 09.00-09.20 or 14.00-14.20

- Welcome and **check in**
- **Pastoral** check in, anything for you to be aware of? Offer support and one-to-one discussion if needed
- Run through the **learning objectives, session plan and timings** for this session

You may wish to:

- Revise preparing, opening and gathering from the last session. Consider aspects of formulating
- Brainstorm the broad areas of the medical history
- Consider the elements of the cardio-respiratory system that can be assessed clinically in GP e.g. pulses, O2 saturations, BP, heart sounds. Think about how these could be assessed remotely

Patient contact (1 hr 10) 09.20-10.30 or 14.20-15.30

- Half the students interview a patient – either a nearby home visit or can be at the surgery if needed
- The remaining 2 or 3 students observe you consulting with 3 or 4 patients

You may wish to brief the students on the patients in advance. Whether they are interviewing a patient or observing consultations, the students should all introduce themselves to the patient by name and role.

Patient interview. Ideally, this will be a patient with a current or past respiratory problem such as asthma, COPD, lung cancer or pulmonary fibrosis or history of acute breathlessness e.g. PE or pneumothorax. Students should take it in turns to lead the interview and be prepared to feedback to each other on consultation skills (see the GP Teacher guide for practical information about this and a patient letter). Specific student tasks:

- Consider the broad areas of the medical history when you are interviewing a patient or observing consultations this week. Try to gather a history in all three domains
- Ask about symptoms and any known risk factors for respiratory disease
- Reflect on how you or the person you observed facilitated rapport with the patient: verbal/non-verbal communication skills which help the patient tell their story/demonstrated listening
- How did you encourage the patient to talk? Were there any silences?
- Were there any difficult points in the interview and how did you deal with these?

Observing consultations. Ask the students to practice and observe **communication skills,** for feedback and discussion in the debrief. **Specific tasks:**

- Discuss what information can be gathered from active, purposeful observation of patients
- Observe how the GP prepares for and opens the consultation (COGConnect template, available here)
- Reflect on gathering information, the content and process and what questions worked well
- Can you identify the patient's agenda? What do you think were their ideas, concerns and expectations about what was going on? What about impact and emotions as well?
- What information did you/your GP need to find out what was going on? Were all the clues in the history and examination or did they order further tests?
- Try using the STOP!4WHAT? template for formulating

10-minute comfort/toilet/stretch/tea break as needed

Debrief and discussion (1hr 10) 10.40 – 11.50 or 15.40 – 16.50

Ask one student to summarise the patient's story from the **patient interview. Discuss and reflect** on the patient's narrative — you may wish to use the reflective tool based on the 5C's of COGConnect to aid this — available here. Reflect on the experiences of having a respiratory problem and how these impact on patients' lives

Students present the patients from **observed consultations** to the group: debrief, feedback and discussion around any issues that arise

Discuss which communication skills and question types worked well in the patient encounters with specific focus on gathering the history and finding out the patients' ideas, concerns, and expectations, and formulating.

Discuss risk factors for cardio-respiratory disease and the role of primary care in health improvement and illness prevention

If not done already, discuss how cardiorespiratory examination can be done remotely (see below)

Practical skills: ideally 20-30 min - can be at any point in the session For general info, tips and peer examination policy please refer to the practical skills section in the GP teacher guide. For specific details for respiratory examination, please see appendix 3, p.11 in the appendix below. You may wish to ask the students to show you what they learned in the lecture or watch the short video with the students as a reminder for them. One student can be the patient, one is the examiner, and others can observe and feedback. Your role is to observe and support them and share your experience of performing these examinations in the primary care setting.
Close (10 min) 11:50 – 12.00 or 16:50 – 17.00
• **Take home messages** – share something learned/something that surprised them/ a learning goal etc. • Remind students about their reflective log/ePortfolio • Discuss what worked well/less well – anything to **stop/start/continue** for future sessions?

GP tasks after the session

- Make own **reflective notes** on the session if you wish (try to keep a record of which students interviewed patient/consulted).
- Prepare for and consider appropriate patient to invite to the next session (with your other group Thurs 13th March 2025, CBL fortnight: Neurological. Cons skill focus: explaining)
- Complete online **attendance data**

Any questions or feedback, contact phc-teaching@bristol.ac.uk or lucy.jenkins@bristol.ac.uk

Useful additional info

STOP!4WHAT? — a Mnemonic for clinical reasoning in the consultation

STOP!	Self-consciously pause in the consultation, allowing yourself a moment to consider (during or just after a summary can be a good time)
What?	What do you know? Mental summary of history, observation, examination findings.
So What?	What do I think is going on here? Consider aetiologies: predisposing, precipitating, and perpetuating factors. Differential diagnoses and / or salient problems.
What else?	What else do I need to consider? Actively think of alternate diagnoses and other problems. Consider common biases and how they might be impacting your thinking. What do you not want to miss?
What Next?	What should we do now? Judicious consideration of possible tests, treatments, referrals, and human factors. Consider EBM, AND the person in front of you.

See appendix 2 for formulating in the context of cardiovascular risk assessment

Debrief and discussion

The students should be starting to present back a coherent narrative about a patient they have seen to you and the group. This is likely to be more of 'the story so far' rather than a structured case presentation but please support them in developing this.

Remote assessment of the cardiorespiratory system

Ask the students to think about what they already know about how a standard cardiorespiratory examination would be done in GP or hospital and consider which parts of this may be able to be done remotely? Consider the following:

- Observation around the patient. Look for clues like portable oxygen.
- General appearance via video. Do they appear to be in pain or breathless or unwell? Can you assess complexion?
- How much can you easily see by asking the patient to show you e.g. chest wall movements
- Can you count a respiratory rate in a video or telephone consultation?
- Show students the equipment that you use which some patients may have at home e.g. thermometer, home BP machine and oxygen saturations monitors (many have invested in these during the pandemic). Discuss any advantages and disadvantages of this.
- Discuss if and how can we teach our patients to take their own pulse and resp rate remotely.

Optional additional activities if needed (as in the GP Teacher Guide)

The session plans are reasonably full but sometimes patients cancel or there may be other circumstances when additional teaching resources are needed.

- Activity practising patient introductions – see here
- Discussing recent cases you've seen relevant to their learning
- Students could observe you telephone consulting or participate if the patient consents. They could use the observation tool in the appendix
- **Show and tell** with common consulting room equipment. E.g. thermometer, auroscope, sphyg, urine dip, swab, sats probe. Hold one up and ask students to tell you what it is, how to use, what is normal etc.
- Use https://speakingclinically.co.uk/. Watch together a clip of a patient describing a condition and then reflect on this as a group. Log in at https://speakingclinically.co.uk/accounts/login/. Use email as phc-teaching@bristol.ac.uk. Password: primcareGP1GP2. The students have been signposted to specific lung cancer patients on this site and can access this with you through their OneNote if needed. They also have access to similar patient interviews at https://healthtalk.org/
- Discussing significant events that have occurred recently at the surgery
- Role play as below: one student plays the patient; another is the medical student meeting the patient before their consultation. Please allocate the others specific areas to observe and give feedback on the role-play afterwards.

Student 1 has 5 mins to read up on (patient.co.uk) and prepare a case for a respiratory consult. Student 2 plays the GP, practising opening the consultation and taking a history. Others can observe and feedback. The students will need some basic info and lots of guidance but should be able to give it a go, it is great practice, and it will help make the discussion about themes more real.
-Recurrent chest infections and SOB on exertion in a 60-year-old factory manager. Smoker since aged 16. Now struggling to play golf and to look after his grandchildren. Likely new diagnosis COPD
-Or coughing up blood in a 39-year-old with recent Covid, persisting mild cough. Non-smoker, otherwise well. No other symptoms. Missing social contact as he now works from home (since the pandemic) and generally worried but not depressed. Possible PE, pneumonia or torn blood vessel due to cough.

APPENDICES

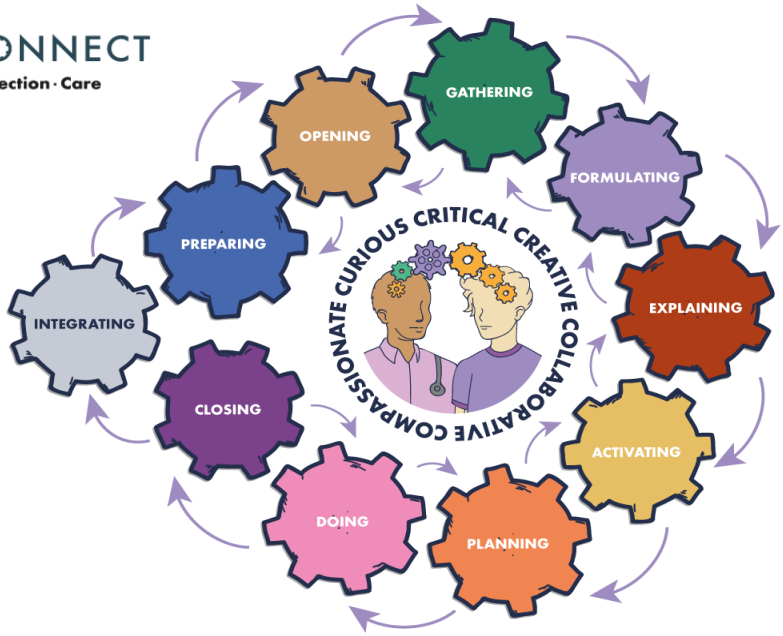
APPENDIX 1.

Formulating – student resources from Effective Consulting teaching

The following pages are extracted from the students' digital notebook (OneNote) and covers the relevant phase of COGConnect (our toolkit for teaching and learning about clinical encounters). **GP TEACHERS DO NOT NEED TO READ THIS UNLESS INTERESTED**

Each fortnight students will be focusing on a different stage. Most recently, the students are asked to consider FORMULATING which involves clinical reasoning, decision making and hypothesis generating. Formulating is clearly based on information gathered; if necessary, please see the previous session guide for the info the students are given about gathering information.

COGCONNECT
Cognition · Connection · Care



PREPARING
Am I prepared?

- Preparing oneself
- Preparing the space
- Checking the medical record

OPENING
Are we off to a good start?

- Establishing the agenda
- Establishing relationships
- Initial observations

GATHERING
Have we covered all the relevant areas?

- Sources of understanding
- History
- Clinical examination

FORMULATING
What is going and what is next?

- Bias checking
- Considering the options
- Red flag signs and symptoms

EXPLAINING
Have we reached a shared understanding?

- Chunking
- Checking
- Visual Aids

ACTIVATING
Is the patient better placed to engage in self-care?

- Identifying problems and opportunities
- Rolling with resistance
- Building self-efficacy

PLANNING
Have we created a good plan forward?

- Encourages contribution
- Proposing options
- Attends to ICE (IE)

CLOSING
Have I brought things to a satisfactory end?

- Summary
- Patient questions
- Follow Up

DOING
Have I provided a safe and effective intervention?

- Formal and informal consent
- Due regard for safety
- Skilfully conducted procedure

INTEGRATING
Have I integrated the consultation effectively?

- Clinical record
- Informational needs
- Affective progressing

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Formulating

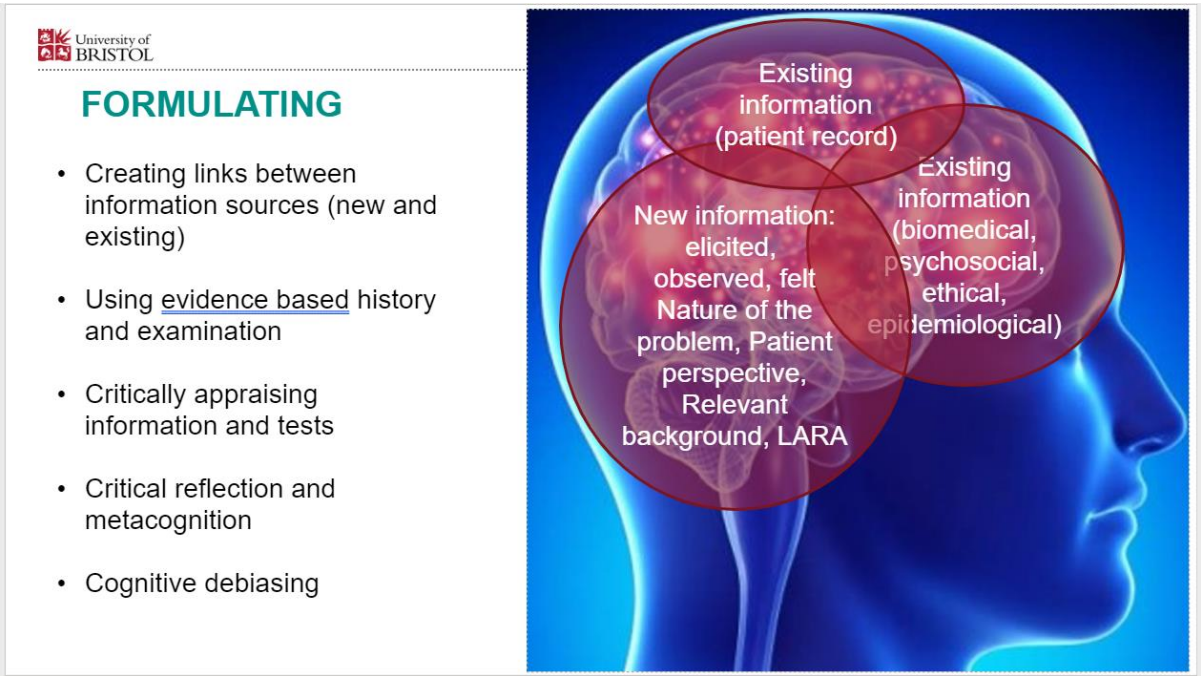
Clinical reasoning sits within Effective Consulting as one of our three domains. Of the 5 core values with which we expect students to approach every clinical encounter (curiosity, compassion, creativity, criticality, collaboration) clinical reasoning encompasses curiosity (the why and what), creativity (new solutions) and criticality (the judicious application of evidence-based medicine). Arguably, how doctors reason and make decisions is one of our most critical skills. Clearly, Clinical Reasoning is a broad church. **Formulating** (the focus of this fortnight) is **the place where clinical reasoning meets the patient.** Formulating should be seen as a chance for doctors (and medical students) to stop and think, and to make links between prior knowledge and new knowledge. It should be a place of reflection in action, with the patient at its centre.

Until now, clinical reasoning has rarely been formally taught at medical schools, but we want doctors who are both knowledgeable, and able to make good decisions, so it makes sense to support and facilitate the acquisition of reasoning skills alongside the acquisition of medical knowledge.

In order to formulate well, one needs to have:

- Prepared the consultation well
- Opened the consultation well
- Gathered appropriate information
    - Information from clinical (hi)stories
    - Nature of the current medical problem
    - Patient's perspective on the problem
    - Relevant background and lifeworld
    - Information from Clinical Examination
    - Information from Bedside tests
    - Information from other sources (notes/relatives/colleagues/letters)

Here is a short video example of formulating in action **https://youtu.be/YNFFyS1ykOw**



Once a doctor has gathered information from the history, examination, and other sources such as test results, the doctor needs to consider what to do next. The doctor should ask themselves if they

understand what is going on and what it means for the patient? They may ask themselves questions like:

a. What do I think the main problem is?
b. What do I think the diagnosis is? (Or even 'is there a diagnosis'? Note, this is not necessarily the same as the main problem)
c. What else could it be?
d. Is there anything that doesn't fit?
e. What must I not miss?
f. Is there more than one thing going on?
g. Do I need more information?
h. What is the patient most worried about? Is that the same as what I'm worried about?
i. Why do I think what I think (what is the underlying anatomy/physiology, what is the symptomatology, what's the likelihood of a condition)?

Experienced doctors may not seem to need to ask these questions. This is only because they can rely more on "Type 1" intuitive thinking and pattern recognition (or they are not verbalising their thinking!)—but they only got to this stage by seeing many patients and learning from their tutors. You will not be able to make good differential diagnoses yet because you don't yet know what all the options are. But you can begin to learn about how your tutors make the diagnoses and decisions by asking and encourage your tutors to "think out loud" about the patients you meet.
We would encourage you to see formulating as a phase of the consultation to STOP and THINK. You may find the mnemonic below helpful.

STOP!4WHAT? - a Mnemonic for clinical reasoning in the consultation

STOP!	Self-consciously pause in the consultation, allowing yourself a moment to consider (during or just after a summary can be a good time)
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What else?	What else do I need to consider? Actively think of alternate diagnoses and other problems. Consider common biases and how they might be impacting your thinking. What do you not want to miss?
What Next?	What should we do now? Judicious consideration of possible tests, treatments, referrals, and human factors. Consider EBM, AND the person in front of you.

A template for formulating using STOP!4What?

Students won't have a printed copy of this, although it is in their electronic notebooks. You may want to print it for them to use whilst observing consultations, or to clarify their thoughts after meeting a patient at home.

STOP!	Self-consciously pause in the consultation, allowing yourself a moment to consider:

WHAT?	
What do I think the nature of the medical problem is?	
What do I think the relevant background and lifeworld information is?	
What do I think the patient thinks about what's going on? (ICEIE)	
SO WHAT?	
What do I think is going on here? Why? What's the underlying anatomy? What's the underlying physiology? What conditions am I aware of that this could be? Could I write a problem list or come up with some differential diagnoses?	
WHAT ELSE?	
What else do I need to consider? Actively think of alternate diagnoses and other problems. Consider common **biases** and how they might be impacting your thinking. What do you not want to miss? Red Flags? Important but rare?	
WHAT NEXT?	
What should we do now? Consideration of possible tests you might want to request (and why?). What treatments options are there? Does this person require referral / admission / discharge? Are there any other factors to consider? Consider Evidence Based Medicine AND the person in front of you.	
Next steps: how will you communicate all of this? To the patient? To a colleague?	

Considering common bias

Think about these different types of bias and how they may affect how healthcare professionals assess and manage their patients.

Type of Bias	Meaning
Ascertainment bias	When we see what we expect to see– a self-fulfilling prophecy
Availability bias	When things are at the forefront of your mind because you have seen several cases recently or have been studying a condition
Commission bias	The tendency towards action rather than inaction
Confirmation bias	The tendency to look for confirming evidence rather than disconfirming evidence (to refute your hypothesis) even if the latter is clearly present.
Premature closure	The tendency to prematurely shut down the decision-making process and accept a diagnosis before other possibilities have been explored
Unpacking principle	Failing to 'unpack' all the available information and so things get missed or discounted
Visceral bias	The influence of either negative or positive feelings towards a patient which can affect our decision making.

Appendix 2. Risk Factors for Cardiorespiratory disease

Considering the likelihood of diagnoses – using risk factors in formulating

Think back to the 'gathering' of information which included the risk factors below. A number of these are specifically relevant to respiratory disease as well and remember that a number of primarily cardiac conditions can present with shortness of breath or other respiratory symptoms.

- Smoking
- High blood pressure
- Blood lipids
- Other conditions such as Diabetes, Rheumatoid arthritis, Depression
- Older age
- Family history
- Stress
- Indian subcontinent or Afro-Caribbean ethnicity

As you can see, some risk factors are modifiable e.g. smoking, in other words the patient can do something about them such as stop smoking or take medication or change their lifestyle to reduce their blood lipids and blood pressure. Other risk factors such as family history or age are not modifiable. Doctors identify risk factors to help predict the likelihood of someone developing disease and focus on the modifiable risk factors to try and prevent disease occurring (primary prevention). When you are meeting a patient, think about HOW you ask questions to get into these topics. Some of this will be part of your clinical history e.g. "do you smoke", some will be related to 'non-medical' aspects of lifestyle and others will be related to lifeworld (the experience of the patient and their environment for example, adverse childhood events, poor housing, living in a 'nutritional desert'). HOW do you ask someone things like this? You will have practiced this in your EC Lab. Give it a go with real patients in GP.

This information is important when formulating diagnoses (i.e. a smoker is more likely to have lung problems than a non-smoker), and your management plan may include tackling such risk factors. Clinical Tools have been developed which take into account symptom load, and risk factors, and can calculate the risk of someone having (for example) an undiagnosed Cancer. QCancer is an example of this. Your GP tutor may have this software embedded in their clinical system.

Appendix 3 - Clinical skills practice: Examination of the Respiratory system

For general info and peer examination policy please refer to the practical skills tips sheet here. Remember that the students have already had a lecture, and skills lab on this so your role is not to teach it but facilitate practice on each other in a clinical environment.
You may wish to ask the students to show you what they learned in the lecture or watch the short video below* with the students as a reminder for them. One student can be the patient, one is the examiner, and others can observe and feedback. Your role is to observe and give immediate feedback and correction, and lots of enthusiasm and support! They do not need to think about diagnosis and will not be considering abnormal signs or symptoms at this stage. They will revisit this in year 2.
Many clinicians will undertake examinations slightly differently. This can make it challenging for students to learn examinations. The eventual aim is for students to develop their own, competent, comprehensive, well-structured examination that would enable them to pick up clinical signs and use the information gathered to formulate a clinical diagnosis with appropriate investigation and management plans. At this early stage the aim of the university teaching is for students to understand WHY they are doing particular steps of an examination and HOW this might relate to the underlying anatomy and physiology. The focus is on human health and wellbeing, so the focus here will be on 'normal' anatomy and physiology, and function.
Students have already learned blood pressure as part of a NEWS basic clinical skills session last block so they do not necessarily need to practice this today but may value the opportunity only if here is time.

* You may want to have a look at Geeky medics to recap a respiratory exam, but the students are not required to cover every aspect of this in this session.
Respiratory Examination - OSCE Guide | Geeky Medics

Please use this as an opportunity to revise and practice preparing and opening

- Use COG Connect to guide steps for this
- Try running through 'WIPER'
  - **W** - Wash hands
  - **I** - Introductions
  - **P** - Gain Permission
  - **E** - Expose as appropriate
  - **R** - Reposition

Summary of respiratory examination

General Inspection

- General appearance, breathing, equipment around the bed

Hands and arms

- Signs in the nails/fingers, temperature

Arms

- Pulses, blood pressure, tremor and flap

Face

- Eyes (e.g. pallor, pupils etc), Mouth (e.g. cyanosis, hydration level)

Neck

- JVP, pulses, tracheal deviation, lymph nodes

Inspect the Chest

- Scars, shape, deformity, breathing rate and rhythm

Palpate the Chest

- Heaves, thrills and apex beat. Expansion

Percuss the chest

Auscultate

- Breath sounds and added sounds

Additional sites

- Sacral and peripheral oedema, calves

There is more detailed info here on each aspect, in slides taken directly from the student teaching materials, if you wish to read more

General Inspection

From the end of the bed	
Airway	Any evidence of airway compromise or stridor
Medical equipment	Oxygen delivery devices, Inhalers, nebulisers, spacers, monitoring devices
Mobility aids	May give an indication of the patient's current mobility
Pillows	Is the patient using lots of pillows to prop themselves up to support their breathing (underlying cardiorespiratory conditions?)
NEWS2 chart	Indication of the current clinical status and how this has changed over time
Fluid balance chart	Dehydration and/or fluid overload
Prescription chart	To consider underlying conditions and potential side effects
Respiration	Observe pattern, rate, use of accessory muscles, evidence of wheeze of cough. In a child, any evidence of respiratory distress (tracheal tug, recession, grunting)
Pallor / cyanosis / flushing	The colour of the patient may indicate inadequate oxygenation, or give some indication of underlying illness
Oedema	Swelling of the limbs or abdomen which may suggest fluid overload
Body habitus	High or low body habitus may be a contributory factor, or a results of underlying illness

Hands

Where	Examine	Example of why
Nails	Clubbing	Chronic hypoxia promotes vascular endothelial growth factor and changes to the distal phalanges
	Tar staining	Associated with smoking and increased pulmonary risk factors
Palm	Colour	May find signs of peripheral cyanosis suggestive of hypoxia
	Palm	Pale creases suggestive of anaemia or palmar erythema secondary to increased cardiac output / some respiratory illnesses

Arms

Where	Examine	Examples of why
Wrist	Radial pulse (rate)	Check for tachy/bradycardia
	Radial pulse (rhythm)	Check rhythm is: • Regular – e.g. sinus rhythm • Regularly irregular • Irregularly irregular • Also count the **respiratory rate** whilst feeling for the pulse
Arm(s)	Blood pressure	Check for hyper/hypotension
	Fine tremor and flap	Fine tremor secondary to high dose beta agonists. CO2 retention flap

Face

Where	Examine	Examples of why
	Whole face	Swelling suggestive of superior vena cava obstruction (secondary to tumour invasion in the mediastinum)
Eyes	Orbital position, pupil, lids	Interruption of sympathetic nerves to the eye (which run in the upper thoracic spinal segments)
	Conjunctival pallor	Associated with severe anaemia (the red blood cells are not as red, and therefore pallor is observed)
Mouth	Central cyanosis	Associated with desaturation – the less oxygenated blood is not the same colour as oxygenated blood and therefore the skin as a different colour pattern (due to underlying vascular networks)
	Hydration status	Check for dehydration
	Tongue / mandible / palate	Check for abnormalities that might obstruct the airway

Neck

Where	Examine	Examples of why
Neck	Carotid pulse (character)	Bounding pulse associated with CO2 retention
	Carotid pulse (volume)	Thready pulse associated with cardiogenic shock
	Jugular venous pressure	Elevated JVP associated with fluid overload, right heart failure
	Tracheal deviation	Deviates away from a tension pneumothorax. Deviates towards a loss of lung volume
	Lymph nodes	Assess for lymphadenopathy

CHEST: look, feel, tap, listen

What?	Where?	Why?
Inspection	Chest wall	Scars: surgery, trauma Pectus carinatum/excavatum Shape of the chest wall Breathing rate and rhythm Drains
Palpation	Chest wall	Apex beat (displaced?) Right ventricular heave Chest expansion (upper and lower thorax) Rarely, surgical emphysema (air trapped insubcutanous tissues)
Percussion	Chest wall	Percuss for dullness associated with lack of resonance in lungs that are filled with something other than air (consolidation or fluid) Compare L and R, and check anteriorly and posteriorly
Auscultation	Chest wall	Auscultate to assess for symmetry of sounds R and L, anteriorly and posteriorly, and in the lateral chest wall (mid axillary line) Listen for added sounds: wheeze, crackles, rubs
	Chest wall	Vocal resonance Assess the transmission ofverbalisation – spoken sound is muffled in a healthy lung. Sounds are heard more loudly in consolidated (solid) lung tissue and reduced in areas with increased air, or surrounding fluid (effusion)

Link to video re lung sounds (on slide 16 of this link)

Additional sites of examination

Where	Examine	Why
Lower back	Sacral oedema	Suggestive of fluid overload
Legs	Pitting oedema	Suggestive of fluid overload Note upper extent of oedema
	Calves	Unilateral swelling, redness, pain, associated with Deep Venous Thrombosis (and a risk for Pulmonary embolus)