



Thinking about
applying to Medicine?
Resources for prospective students
SUMMER 2020

Dr Rhianedd Tudor Jones, Phase One Community Lead

Dr Sue Emerson, Phase Two Community Lead and Admissions Group

Vicki Roylance, Student Recruitment Manager

An introduction

We understand that it is a difficult time to get work experience in a healthcare environment. There is still much you can do to gain an insight into a career in Medicine.

Online videos, podcasts and other material can help you to develop your interest and understanding of health care as a profession especially if you learn to reflect on what you see, hear and learn. The value of any activity you undertake including work experience is in thinking about what you have learned from it – how that has helped you to decide that a career in Medicine is right for you (and that you are right for it) or how what you have learned will help you and thereby your future patients and colleagues in your intended career path.

How do you reflect?

Before we suggest resources that may help you gain an understanding of a career in Medicine, you will need to learn how to reflect. When we reflect, we consider deeply something that we might not otherwise have given much thought to. This helps us to learn. Reflection is concerned with consciously looking at and thinking about our experiences, actions, feelings, and responses, and then interpreting or analysing them in order to learn from them. Typically, we do this by asking ourselves questions about what we did, saw, heard and how we did it, and what we learnt from doing it.

One way of reflecting well is to keep a journal. This could include asking yourself certain questions such as *'what did I learn?' 'what went well?' 'what could have been done better?'*



When watching some of the videos or listening to podcasts consider asking yourself the following questions;

1. **Summarise your interpretation of what you've just heard/seen**
2. **What did you learn?**
3. **What did you get out of it? Was it what you expected?**
4. **What impact has it had on you and your thoughts?**
5. **Has it changed your way of thinking about things or has it changed your views?**

There is a detailed booklet all about reflection in the Royal College of General Practitioners (RCGP) online resource <https://www.rcgp.org.uk/training-exams/discover-general-practice/observe-gp>

The following information may give you some ideas about things you might find interesting and enjoyable and which may help to support your decision making regarding your future career choice and subsequent university application. These are largely aimed at those intending to apply for Medicine but some will also be of interest and relevance to those considering Dentistry, Biomedical Science, Pharmacology and other healthcare professions or science disciplines.

Online lectures

The Cardiff Science in Health Public Lecture Series is on hold for now but the back catalogue of recorded lectures is here - <https://www.cardiff.ac.uk/medicine/about-us/engagement/science-in-health> These include lectures discussing current healthcare issues such as obesity, genetics etc.

Likewise several other universities have similar recorded lectures or podcasts e.g.

- Imperial - <https://www.imperial.ac.uk/be-inspired/social-and-multimedia/lectures-online>
- Oxford - <https://podcasts.ox.ac.uk/series>

Work experience

Your work experience/volunteering has probably been cancelled/postponed – we will be aware of this when assessing applications. There are some useful online resources you could look at.

The RCGP has an online resource providing insight into General Practice - <https://www.rcgp.org.uk/training-exams/discover-general-practice/observe-gp.aspx> which also includes a resource to help you reflect on your learning.

The Medical Schools Council has also produced a useful guide - <https://www.medschools.ac.uk/media/2636/guidance-on-gaining-relevant-experience-for-studying-medicine-in-the-time-of-covid-19.pdf>

Brighton and Sussex Medical School have a free virtual medical work experience opportunity - <https://bsmsoutreach.thinkific.com/courses/VWE>

St George's Medical School have "**A Taste of Medicine**" as an online resource – <http://www.tasteofmedicine.com/index.htm>

There are also Covid-19 local community volunteering/support activities that you may be able to assist with (depending on your educational commitments and both your own health and that of those with whom you share a household – please discuss with your parent/guardian/carer).

Core values and guidance

These resources will help you to understand both the expectations of and duties of medical students and doctors and the frameworks which guide us and how we practise. Understanding and thinking about these will help you to decide if Medicine is the right choice for you and will be valuable in preparation for any interviews you may be invited to.

NHS

It would be useful to understand the core NHS values and constitution and how they guide all of us working within the NHS every day - <https://www.healthcareers.nhs.uk/working-health/working-nhs/nhs-constitution> and <http://www.wales.nhs.uk/governance-emanual/values-and-standards-of-behaviour-framew>.

General Medical Council (GMC)

The GMC (General Medical Council) website contains a number of important guides that you should be aware of including -

https://www.gmc-uk.org/-/media/documents/Achieving_good_medical_practice_0816.pdf_66086678.pdf

<https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice/duties-of-a-doctor>

<https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/good-medical-practice>

<https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/confidentiality>

<https://www.gmc-uk.org/ethical-guidance>

Medical Schools Council (MSC)

This guide from the Medical Schools Council (MSC) will provide useful insight into the core values and personal attributes expected of medical students in the UK. Understanding what we expect and seek may help you to reflect on your own experiences and learning and how they may help you to demonstrate your suitability for medical training. This might be particularly useful when preparing for interview as well as when writing your personal statement. Try to think of examples when you have used particular skills or traits or, conversely, recognised that you needed to learn or develop these skills and how you did so.

<https://www.medschools.ac.uk/media/2542/statement-on-core-values-to-study-medicine.pdf>

Online courses (MOOCs)

For any courses that have an interactive element with other learners then participants, particularly those under 18, should get consent from their parent/guardian/carer before enrolling and exercise their usual caution for safe online behaviour.

The Open University has lots of free online courses - <https://www.open.edu/openlearn/free-courses/full-catalogue> and is open to learners 13+.

Coursera www.coursera.org - hundreds of short (and some longer) online modules from universities around the world. You need to register (free) then browse - there are lots related to science and healthcare. Some of the courses are free to enrol on and complete but may have a fee to receive a certificate - remember that the value is

in the learning and reflection rather than the certificate. Some courses have a fee for any participation but plenty don't.

Similarly - **Futurelearn** - <https://www.futurelearn.com/courses> - again lots to choose from of variable length, many are free to complete but may have a fee for a certificate - the comment above re: the value being in the learning holds true.

Books

This is just a small selection of the many books you might enjoy and find useful learning from:

The Soul of Medicine: Tales from the Bedside
Sherwin Nuland

The Emperor of all Maladies: A Biography of Cancer
Siddhartha Mukherjee

The House of God
Samuel Shem

When Breath Becomes Air
Paul Kalanithi

The Man Who Mistook his Wife for a Hat
Oliver Sacks

Being Mortal
Atul Gawande

The Immortal Life of Henrietta Lacks
Rebecca Skloot

Do No Harm
Henry Marsh



Current events and medical and scientific developments

It would be worthwhile considering current topical issues and health concerns and how they may impact on the health service and those working within it.

Your school or local library once re-opened may have subscriptions to **New Scientist/Nature** which will keep you well informed about current scientific discussions and areas of development.

Richard Lehman's BMJ weekly medical journal round up is publicly accessible (free) <https://blogs.bmj.com/bmj/category/richard-lehmans-weekly-review-of-medical-journals/> – the back issues are also available.

This historic diary <https://www.bmj.com/content/bmj/283/6307/1656.full.pdf> - by Alex Paton who went to assist in Belsen in 1945 whilst still a medical student may allow you to consider the role and expectations of medical students (and how that may differ from other students) and draw parallels with our medical students, many of whom are now volunteering in clinical settings.

Look at **The Guardian's** science pages: <https://www.theguardian.com/science> or

The Telegraph's health pages: <https://www.telegraph.co.uk/health>
Free for first seven days as a trial.

Wales-specific health news and developments are updated regularly here: <https://www.bbc.co.uk/news/topics/clw2y682n5dt/nhs-wales>

The **British Medical Journal's** open access information: <https://bmjopen.bmj.com>

Bright Knowledge has a bank of resources and news articles: <https://www.brightknowledge.org/medicine-healthcare>

This site has many articles on exploring careers in Medicine in healthcare, how to apply, guidelines and a lot of other useful information as well as new topics.



Podcasts

Here is a link to regularly updated medical podcasts <https://journals.bmj.com/sites/default/files/podcasts/index.html>

Bedside Tales is an interesting collection of podcasts discussing the human stories that have shaped modern Medicine - <http://bedside-rounds.org/category/podcasts>

The Doctor Paradox <https://www.stitcher.com/podcast/paddy-barrett/the-doctor-paradox> – discusses some of the challenges faced by doctors and strategies we may use to overcome them.

Everyday Emergency from Médecins Sans Frontières <https://www.msf.org.uk/everyday-emergency-msf-podcast> discusses and gives insight into providing healthcare in some of the most challenging global situations.

Inside the Ethics Committee <https://www.bbc.co.uk/programmes/b007xbtd/clips> – discusses ethical issues arising from real-life patient cases.

You might also enjoy listening to **Health Check** <https://www.bbc.co.uk/programmes/p002vsw/episodes/downloads> - or **Inside Health** - <https://www.bbc.co.uk/programmes/b019dl1b/episodes/downloads>

Inside Science <https://www.bbc.co.uk/programmes/b036f7w2/episodes/downloads> – gives a broader update on scientific developments and

Analysis <https://www.bbc.co.uk/programmes/b006r4vz/episodes/downloads> – and

File on Four <https://www.bbc.co.uk/programmes/b006th08/episodes/downloads> discuss topical and current events.

The Reith Lecture series on Radio 4 <https://www.bbc.co.uk/programmes/b00729d9/episodes/guide> – you may find many of this back catalogue interesting but particularly the 2014 Future of Medicine Series by Dr Atul Gawande

Why do Doctors Fail? <https://www.bbc.co.uk/programmes/b04bsgvm>

The Century of the System <https://www.bbc.co.uk/programmes/b04sv1s5>

The Problem of Hubris <https://www.bbc.co.uk/programmes/b04tjdlj>

The Idea of Wellbeing <https://www.bbc.co.uk/programmes/b04v380z>

As with all the resources don't just listen to the podcasts, reflect on them. Ask yourself questions and try to understand the views of others as they may be different to yours.

TV programmes/documentaries

The Horizon archive is well worth a browse - <https://www.bbc.co.uk/programmes/b006mgxf>

Louis Theroux has made some interesting documentaries some of which look at health topics - <https://www.bbc.co.uk/iplayer/episodes/b05qzmgd/louis-theroux>
This one exploring brain injury might encourage you to think about the effects of health not only on the individual but also on those around them - <https://www.bbc.co.uk/iplayer/episode/b07c6fjk/louis-theroux-a-different-brain>

TED talks

There are Ted talks to cover any area of health - <https://www.ted.com/talks?sort=newest&topics%5B%5D=health> and healthcare - <https://www.ted.com/talks?sort=newest&topics%5B%5D=Healthcare>

You might enjoy this one about health behaviour and behaviour change - https://www.ted.com/talks/david_asch_why_it_s_so_hard_to_make_healthy_decisions

And this one which discusses compassion in healthcare (US-based clinician talking but the lessons are relevant in the UK also) - https://www.ted.com/talks/stephen_trzeciak_healthcare_s_compassion_crisis_jan_2018

Empathy

What is empathy?

Watch this GMC video <https://www.gmc-uk.org/ethical-guidance/learning-materials/what-do-patients-think> and then consider the patient perspective and how we can be alert and responsive to this. What might the patient be thinking about while waiting for their consultation? What might the patient want from their consultation?

Information on studying Medicine

Including personal statements, how to apply and many other topics can be found at <https://www.brightknowledge.org/medicine-healthcare/studying-medicine>

We hope that these resources are helpful. If you are interested in learning more about Medicine at Cardiff these links will provide further information

Our C21 course - https://www.cardiff.ac.uk/data/assets/pdf_file/0012/1767189/Undergraduate_Medicine_2021_entry.pdf

Admissions - <https://www.cardiff.ac.uk/study/undergraduate/applying/admissions-criteria/medicine/medicine>

Admissions policy for applicants for 2021 entry (updated annually) https://www.cardiff.ac.uk/data/assets/pdf_file/0005/357809/Admissions-Policy-for-Undergraduate-Programmes-in-Medicine-2021-entry.pdf

Routes into Medicine - https://www.cardiff.ac.uk/data/assets/pdf_file/0010/1744723/Routes-into-Medicine-Bilingual.pdf

Our admissions team are happy to help at - medadmissions@cardiff.ac.uk



UCAT prep, information and resources

This information is correct as of April 2020 – applicants should check the most up-to-date guidance.

The UCAT (previously UKCAT) – University Clinical Aptitude Test is one of the tests used by UK medical and dental schools as part of the assessment of your UCAS application. The others are the BMAT (Biomedical Admissions Test) and GAMSAT (Graduate Medical Schools Admissions Test).

If you are applying to medical school straight from sixth form you will sit either the UCAT or BMAT or both depending on which medical schools you are intending to apply to. In Cardiff we ask our applicants to sit the UCAT.

Check the specific requirements of the medical schools you are interested in – the Medical Schools Council Guide to applying to UK medical schools is updated annually and contains information regarding (minimum) entry requirements for each of the UK medical schools. This is the link for applicants for the last admissions cycle for 2020 entry <https://www.medschools.ac.uk/studying-medicine/applications/entry-requirements>. Note - please check back once this is updated with the entry requirements for the next admissions cycle for 2021 entry (not updated at the time of compiling this information sheet) as requirements can and do change.

Some schools require their applicants to take the required admissions test at a particular sitting – again, check the Medical Schools Council Guide (once updated) and the specific admissions page on the individual medical school's website e.g. ours is here - <https://www.cardiff.ac.uk/study/undergraduate/applying/admissions-criteria/medicine/medicine>. The admissions teams for each medical school will also be available (currently likely to be by e-mail but more usually also by phone) to answer queries – they will be friendly and approachable – do not be afraid to contact them.

The **UCAT** website is here – <https://www.ucat.ac.uk>

UCAT also have Twitter, Facebook and Instagram pages - the links are on their homepage.

Bright Knowledge also have advice on UCAT <https://www.brightknowledge.org/medicine-healthcare/ucat-explained>

The **BMAT** website can be found here - <https://www.admissionstesting.org/for-test-takers/bmat> They also have a twitter account.

With some additional information here <https://www.brightknowledge.org/medicine-healthcare/bmat-explained>

The official UCAT and BMAT websites and social media accounts are regularly updated – this might be particularly important in the current situation.

Both the UCAT and BMAT websites contain clear information about the tests and lots of free materials you can (and should) use in preparation.

UCAT is usually taken between July and October and BMAT in September or November (check specific school requirements re: which sitting they require) – you could certainly be starting to prepare now although no dates have yet been released for this summer's test dates – check back regularly.

This information sheet will focus on UCAT as that is the admissions test used here at Cardiff University School of Medicine.

UCAT is a two-hour online test which assesses potential rather than knowledge – that said, good preparation can and is likely to make a big difference to your score. You can only take the test once in each admissions cycle and you will get your result the same day when you leave the test centre (you can therefore use this knowledge to help decide which medical schools you will apply to – check how different schools weight the UCAT score using the Medical Schools Council Guide). You do not need to know or tell UCAT which medical schools you will be applying to when you register for or take the test. UCAT communicate directly with the central university application organiser (UCAS) to transfer your result directly to the medical schools once you have applied.

The test is taken at a Pearson Vue centre. You can find your nearest centre using this facility - <https://wsr.pearsonvue.com/testtaker/registration/SelectTestCenterProximity/UKCAT?conversationId=3865782>

You have to register in advance - <https://www.ucat.ac.uk/ucat/registration-booking> It might be sensible to book in plenty of time once bookings open as sessions may fill up especially towards the end of the test period.

If you are eligible for access arrangements in public exams then access arrangements can be made for the UCAT test (UCATSEN) – information is available on the website - <https://www.ucat.ac.uk/ucat/access-arrangements>

There is a fee payable for the test. Financial support is available – do not be afraid to ask – this should not be a barrier to applying - <https://www.ucat.ac.uk/ucat/bursary-scheme> You can apply for the bursary in advance of booking your test so you have the bursary voucher code ready when you book, but if you didn't you can still get the bursary retrospectively.

Register using your legal name which matches that on your photographic ID.

On the day of the test arrive in plenty of time to allow for getting lost, finding parking, delayed bus and so on. You will need to take a printed or electronic copy of your appointment confirmation e-mail AND photographic ID – details on what can be accepted can be found here - <https://www.ucat.ac.uk/ucat/test-day> - don't forget to take these with you as they will have to turn you away.

This short video shows you what to expect on the test day - <https://vimeo.com/269816550>

The test is broken down into 5 sub-sections – each have different numbers of questions and time allocated – use the (free) practice materials to get familiar with this – the UCAT needs good time management to maximise your chances of a high score. The questions are presented as multiple choice and there is no negative marking. Once the test starts it cannot be paused.

Verbal Reasoning – 44 questions, 1 minute instruction then 21 minutes test time (UCATSEN – 1 minute 15 seconds instruction then 26 minutes 15 seconds test time).

Decision Making – 29 questions, 1 minute instruction then 31 minutes test time (UCATSEN – 1 minute 15 seconds instruction then 38 minutes 45 seconds test time).

Quantitative Reasoning – 36 questions, 1 minute instruction then 24 minutes test time (UCATSEN – 1 minute 15 second instruction then 30 minutes test time).

Abstract Reasoning – 55 questions, 1 minute instruction then 13 minutes test time (UCATSEN – 1 minute 15 second instruction then 16 minutes 15 seconds test time).

Situational Judgement – 69 questions, 1 minute instruction then 26 minutes test time (UCATSEN – 1 minute 15 second instruction then 32 minutes 30 seconds test time).

Detailed information about the types of questions for each section can be found here - <https://www.ucat.ac.uk/ucat/test-format/ucat-subtests>

It would be well worthwhile revising some GCSE level maths if you are not doing Maths A level – the quantitative reasoning section of UCAT will be around the level of a good GCSE pass and many medical schools will include a numeracy station in an MMI circuit. Practice using the onscreen calculator <https://www.ucat.ac.uk/ucat/practice-tests/practice-tips> using the practice materials. Refreshing your quick mental maths is also likely to be helpful.

Your score for the SJT section will place you in one of four bands – check the MSC Guide once updated for the medical schools you are interested in applying to as some may not progress applications where the SJT score falls into band 4. Using information from the GMC website and the NHS constitution will help you prepare for this section.

The UCAT website includes a tour tutorial which demonstrates the onscreen functions, how to navigate the test, how to check how much time you have remaining and how to use the flag and review functions - <https://www.ucat.ac.uk/uploads/ukcat-tour/index.html>

It also has guidance on how to approach the test and each subsection - <https://www.ucat.ac.uk/uploads/ukat-tutorials/2019/story.html5.html>

And a large bank of free practice questions <http://questions.ucat.ac.uk/pages/menu.aspx?pack=736eea8d-ff06-4777-adcb-95c8f2f42c04> and timed tests - <http://practice.ucat.ac.uk/pages/menu.aspx?pack=bd52c8e6-da13-44a8-ac5d-3a02d2c1e21b>

Their YouTube channel has additional free resources - <https://www.youtube.com/user/OfficialUKCAT>



GAMSAT (Graduate Medical School Admissions Test) information

This information is correct as of April 2020 – candidates should check the most up to date information at the official GAMSAT website - <https://gamsat.acer.org>

If you have already completed a first degree you will need to meet the graduate admission criteria. The Medical Schools Council Guide contains the (minimum) admissions criteria for all UK medical schools - <https://www.medschools.ac.uk/studying-medicine/applications/entry-requirements?type=graduate-entry-medicine>.

Cardiff-specific graduate entry requirements can be found here - <https://www.cardiff.ac.uk/study/undergraduate/applying/admissions-criteria/medicine/medicine>
Check back once these are updated for the 2021 entry admission cycle.

Like other applicants, graduate entry applicants will need to sit an admissions test. This may be UCAT, BMAT or the test specifically for graduate applicants – GAMSAT. You should check the Medicals Schools Council Guide and admissions pages of specific medical schools carefully. In Cardiff we ask our graduate entry applicants to complete the GAMSAT.

The GAMSAT website includes a detailed downloadable PDF file which outlines the key information you will need. In brief, the test can be taken in either March and September usually in either the penultimate or final year of a first degree although some medical schools may accept the test being taken at other times - <https://gamsat.acer.org/about-gamsat/eligibility> Key registration information, test dates and fee information can be found here - <https://gamsat.acer.org/register> and information about test centre locations here - <https://gamsat.acer.org/register/test-centres>

The GAMSAT is made up of three sections –

- Reasoning in Humanities and Social Sciences
- Written communication
- Reasoning in Biological and Physical Sciences

You can see therefore that it assesses critical thinking, analytical skills, problem solving, skills in written communication, reasoning and interpretation as well as knowledge.

You will need to register in advance and bring your printed admission ticket and photographic ID (<https://gamsat.acer.org/sit/identification>) on the test day. Applicants with specific needs may apply for reasonable adjustments - <https://gamsat.acer.org/register/reasonable-adjustments> - this must be done well in advance of the test date.

The test takes several hours over a single day. The test structure is shown in **Table 1** (below) taken from the GAMSAT website .

Sections 1 and 2 run consecutively with no break followed by a one-hour lunch break before Section 3. Candidates are asked to provide their own lunch as canteen facilities may not be available at all test centres. Bathroom breaks are permitted but the clock does not stop if these are taken.

Sections 1 and 3 are multiple choice with no negative marking.

The result is sent electronically to candidates and is calculated using the formula – **Overall Score = (1 x Section I + 1 x Section II + 2 x Section III) ÷ 4**

In addition, you will be provided with an approximate percentile chart to indicate how your performance sits relative to the rest of the cohort at that sitting. Scores from different sittings are scaled to allow direct comparisons to be made. You should check how the medical schools that you intend to apply to use and weight the GAMSAT score and which sittings are accepted.

The GAMSAT website offers preparatory guidance - <https://gamsat.acer.org/prepare/preparation-strategy> and materials to purchase.

Table 1

Section	Number of questions	Reading time in minutes	Writing time in minutes
Section I, Reasoning in Humanities	75	10	100
Section II, Written Communication	2	5	60
Section III, Reasoning in Biological and Physical Sciences	110	10	170