

Practical tips for medical students: how to use your time while clinical placements are cancelled due to COVID-19

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Most UK medical schools have postponed clinical teaching due to COVID-19, leaving students, who would usually be busy with exam preparations and clinical commitments, with lots of time off. For many students, a long period of completely unstructured self-study time looks daunting. In this article, we share our thoughts and experiences to help medical students to use this time positively, by both continuing their own learning and professional development, and helping the national efforts against covid-19.

Exam preparation

Improve your learning strategies and prepare educational resources

Medicine involves lifelong learning, so it's important to find effective study strategies that work for you. With the pressures of upcoming exams and a seemingly endless amount to learn, it is tempting to "rote learn" a topic, resulting in a superficial grasp of the subject (1). You might use this time to develop more effective learning strategies that support long term knowledge retention. Strategies might include (2):

- Using "concept maps" to make connections within and between topics (eg, different causes and types of seizure and how they relate to each other (2))
- Making notes on topics in your own words, rather than copying out sections of a textbook
- Using examples to describe abstract concepts (eg, using conditions to illustrate different types of genetic inheritance)

Following your medical school's curriculum will also ensure you're covering the right topics.

You can efficiently commit information to memory through repeated self-testing, active recall (e.g. listing side effects of antiepileptic drugs without your notes) and spaced repetition (eg, asking yourself the same question again after longer time intervals) (3). Digital flashcards (eg, Anki (4)) and online question banks (eg, Passmedicine (5)) are study tools that can help you combine these principles (6).

Revise your anatomy using radiology

In the midst of a busy clinical rotation anatomy can get overlooked. Studying anatomy using radiology image banks is a useful way to learn in the context of the imaging seen in practice. Websites and ebooks are a good place to start, and can be easily accessed from home – for example: radiopaedia.org, radiologymasterclass.co.uk, linestubes.com, and Grainger and Allison's Diagnostic Radiology (7–10).

Preparing for practice:

Develop your prescribing abilities

Prescribing drugs as a newly qualified doctor is frequently a source of stress and anxiety amongst students (11), and prescribing errors amongst junior doctors are common (12). Try

familiarising yourself with common sources of prescribing information, such as the British National Formulary (BNF), as well as creating a list of medications you will commonly use as a junior doctor. The World Health Organisation (WHO) recommends that clinicians keep a 'p-drug' list of personal drugs they frequently prescribe, allowing them to become familiar with the indications, contraindications and common side effects (13).

Learn about how technology is changing medical consultations

In the future it is likely clinicians will rely upon digital communication, such as video consultations and e-consulting, as an alternative to face-to-face consultation (14). This has been accelerated by the current pandemic (15). Many of the innovations made to facilitate e-consultations at this time of crisis may remain into better times. You could use this time to further explore and understand the uses of technology in medical consultations.

Learn about pandemics

Pandemics rarely feature in undergraduate medical education. Despite this, we are likely to face emerging infectious diseases in our future clinical practice as their incidence increases globally (16,17). The current COVID-19 pandemic should prompt us to learn more about these diseases, including areas like disease modelling and public health policy. Free online learning resources such as the FutureLearn course on 'Plagues, Pestilence and Pandemics' take learners through a structured programme (18). Many major medical journals have made their COVID-19 content free to access through dedicated web pages that collect all their articles on the pandemic, including reflective and opinion pieces as well as research. Why not try setting up a virtual journal club with other students where you can discuss the latest papers and how to interpret the emerging evidence?

Career development

Get involved in research

While mid-pandemic may seem like a strange time to suggest getting involved in research, the value of evidence-based research to inform clinical and governmental decision-making has never been clearer. Skills developed during research activities, ranging from collecting and assimilating data to collaborating and communicating with others, can be directly useful in your clinical practice (19). Systematic or narrative reviews can be a great introduction to research, and with many centres currently working on rapid reviews (20), there may be local opportunities to get involved.

A case report is a good opportunity to expand on an interesting patient you saw on the wards or a case presentation you were asked to give. The BMJ Case Reports editors have published helpful advice on how to get started (21).

Develop your teaching abilities

All doctors are expected to contribute to the teaching of their colleagues and of medical students. 'Near peer teaching' (22) of fellow students can prepare you for this role, allowing you to develop teaching skills while also supporting clinical faculty (23). The student also benefits from having a role model who offers well-targeted knowledge (24). Consider developing teaching sessions and delivering them remotely to your peers or younger students.

Make sure you include feedback forms to document your progress and commitment to teaching. Your medical school or MedSoc may be looking for students to support more junior peers with teaching whilst lectures and placements are on hold.

Online tutoring can also refine your teaching skills and provide a source of income, whilst helping students and parents who may be worried about continued learning with current school closures.

Develop an area of interest

Have a think about which speciality you'd like to go in to. The Royal Colleges of Physicians (RCP), Surgeons (RCS) and General Practitioners (RCGP) have published advice on this, as has the British Medical Association (BMA) (25–28). You can also explore reflective pieces from doctors about their experiences in different jobs – and consider how these fit with your own values, experiences and future goals. The book “So You Want to Be A Brain Surgeon?” (29) offers detailed and entertaining insights into different fields. If you've narrowed down areas of interest, seek out recent developments in those fields using primers, opinion pieces and reviews. These will keep you up-to-date and may even serve as inspiration for essay-writing competitions. Prize-winning essays can improve your CV and score points in future applications for speciality training (30).

Looking after others and yourself

Offer to help those affected in your local community

There are many uplifting examples of how medical students have stepped forward to help during this pandemic – perhaps most notably the early graduation of final years and their deployment to the wards (31). Besides volunteering in the hospital, we can all contribute to the efforts against this disease. People without close support networks could struggle with practicalities such as shopping, and childcare over coming months. With reduced social contact, many elderly and vulnerable people may be at risk of isolation and depression (32,33). Community support groups are being created nationwide; so join these efforts to help those around you where you can. Helping can be as simple as offering to call isolated members of your community, helping with shopping, offering childcare support or even pet care for busy NHS staff (34).

Invest time in looking after your mental health

Medical students face many challenges at the beginning of their careers, from having a longer degree course to their non-medic friends, to dealing with the pressures and emotional stresses of clinical medicine. This is even more true in the current climate, with additional difficulties presented by social distancing measures and risk to loved ones. Take some time to look after yourself. Be realistic and manage your expectations of what can be achieved during this difficult time. If you can, try to develop strategies to help cope with those negative thoughts, those nagging worries and those things that are outside your control – these strategies will be invaluable in your future career.

Footnotes

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Box 1

Ten tips for using this time positively

- Exam preparation
 - 1) Revise your anatomy using radiology
 - 2) Improve your learning strategies and prepare educational resources
- Preparing for practice
 - 3) Develop your prescribing abilities
 - 4) Learn about how technology is changing medical consultations
 - 5) Learn about pandemics
- Be proactive
 - 6) Get involved in research
 - 7) Develop your teaching abilities
 - 8) Develop an area of interest
- Look out for others
 - 9) Offer to help those affected in your local community
- Look after yourself
 - 10) Invest time in looking after your mental health

Box 2

Mental Health Coronavirus Resources

- Mind - <https://www.mind.org.uk/coronavirus-we-are-here-for-you/>
- WHO - <https://www.who.int/docs/default-source/coronaviruse/coping-with-stress.pdf>
- Mental Health Foundation - <https://www.mentalhealth.org.uk/publications/looking-after-your-mental-health-during-coronavirus-outbreak>
- CDC - <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html>

References

1. Tait H, Entwistle N. Identifying students at risk through ineffective study strategies. High Educ. 1996;31(1):97–116.

2. Richmond A, Cranfield T, Cooper N. Study tips for medical students. *BMJ*. 2019 Apr 11;365:k663.
3. Augustin M. How to learn effectively in medical school: Test yourself, learn actively, and repeat in intervals. *Yale J Biol Med*. 2014;87(2):207–12.
4. Anki - powerful, intelligent flashcards [Internet]. [cited 2020 Apr 5]. Available from: <https://apps.ankiweb.net/>
5. Passmedicine [Internet]. [cited 2020 Apr 5]. Available from: <https://passmedicine.com/>
6. Larsen DP, Butler AC, Roediger HL. Repeated testing improves long-term retention relative to repeated study: A randomised controlled trial. *Med Educ* [Internet]. 2009 Dec [cited 2020 Apr 4];43(12):1174–81. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/19930508>
7. Radiopaedia.org, the wiki-based collaborative Radiology resource [Internet]. [cited 2020 Apr 5]. Available from: <https://radiopaedia.org/>
8. Radiology Masterclass - [Internet]. [cited 2020 Apr 5]. Available from: <https://www.radiologymasterclass.co.uk/>
9. LinesTubes.com - Chest X-Ray Lines, Tubes, and Devices [Internet]. [cited 2020 Apr 5]. Available from: <http://linestubes.com/>
10. Adam A, Dixon AK, Gillard JH, Schaefer-Prokop C, Allison DJ. Grainger & Allison's diagnostic radiology : a textbook of medical imaging. 6th ed. London: Churchill Livingstone; 2014. 2016 p.
11. Coombes ID, Mitchell CA, Stowasser DA. Safe medication practice: Attitudes of medical students about to begin their intern year. *Med Educ*. 2008 Apr;42(4):427–31.
12. Dornan T, Ashcroft D, Heathfield H, Lewis P, Miles J, Taylor D, et al. An in depth investigation into causes of prescribing errors by foundation trainees in relation to their medical education. EQUIP study. Manchester; 2009.
13. de Vries T, Henning R, Hogerzil H, Action DF-A practical manual., 1994 U. World Health Organisation, Guide to Good Prescribing. 1994;
14. HM Government. Personalised Health and Care 2020 Using Data and Technology to Transform Outcomes for Patients and Citizens A Framework for Action. London; 2020.
15. Greenhalgh T, Wherton J, Shaw S, Morrison C. Video consultations for covid-19. Vol. 368, *The BMJ*. BMJ Publishing Group; 2020.
16. Ross AGP, Crowe SM, Tyndall MW, Petersen E. Planning for the Next Global Pandemic. Vol. 38, *International Journal of Infectious Diseases*. Elsevier; 2015. p. 89–94.
17. Jones KE, Patel NG, Levy MA, Storeygard A, Balk D, Gittleman JL, et al. Global trends in emerging infectious diseases. *Nature*. 2008 Feb 21;451(7181):990–3.

18. Plagues, Pestilence and Pandemics: Are You Ready? - FutureLearn [Internet]. [cited 2020 Apr 5]. Available from: <https://www.futurelearn.com/courses/plague-pestilence-pandemic>
19. Brancati FL, Mead LA, Levine DM, Martin D, Margolis S, Klag MJ. Early Predictors of Career Achievement in Academic Medicine. *JAMA J Am Med Assoc.* 1992 Mar 11;267(10):1372–6.
20. Tricco AC, Antony J, Zarin W, Striffler L, Ghassemi M, Ivory J, et al. A scoping review of rapid review methods. *BMC Med* [Internet]. 2015 Sep 16 [cited 2020 Mar 20];13(1):224. Available from: <http://bmcmmedicine.biomedcentral.com/articles/10.1186/s12916-015-0465-6>
21. Biswas S, Jones O. How to write a medical case report. *BMJ.* 2016 Oct 27;355:h3731.
22. Sonagara VJ, Santhirakumaran S, Kalkat HS. The value of near-peer teaching in the medical curriculum. *Adv Med Educ Pract.* 2018 Jan 22;Volume 9:63–4.
23. Ten Cate O, Durning S. Peer teaching in medical education: twelve reasons to move from theory to practice. *Med Teach* [Internet]. 2007 Jan 3 [cited 2020 Mar 19];29(6):591–9. Available from: <http://www.tandfonline.com/doi/full/10.1080/01421590701606799>
24. Lockspeiser TM, O’Sullivan P, Teherani A, Muller J. Understanding the experience of being taught by peers: The value of social and cognitive congruence. *Adv Heal Sci Educ.* 2008 Aug;13(3):361–72.
25. RCP. How to choose your medical specialty | RCP London [Internet]. 2020 [cited 2020 Mar 20]. Available from: <https://www.rcplondon.ac.uk/education-practice/advice/how-choose-your-medical-specialty>
26. RCS. Royal College of Surgeons - Surgical Specialties [Internet]. 2020 [cited 2020 Mar 20]. Available from: <https://www.rcseng.ac.uk/careers-in-surgery/trainees/foundation-and-core-trainees/surgical-specialties/>
27. Royal College of General Practitioners. Discover general practice | RCGP [Internet]. [cited 2020 Apr 5]. Available from: <https://www.rcgp.org.uk/training-exams/discover-general-practice.aspx>
28. BMA. Employment and career advice [Internet]. 2020 [cited 2020 Mar 19]. Available from: <https://www.bma.org.uk/advice>
29. Ward C (Christopher), Eccles S. So you want to be a brain surgeon? 2nd editio. Eccles C ward & S, editor. Oxford: Oxford University Press; 2001. 242 p.
30. Royal Society of Medicine. Prizes for Students | The Royal Society of Medicine [Internet]. 2020 [cited 2020 Mar 19]. Available from: <https://www.rsm.ac.uk/prizes-and-awards/prizes-for-students/>
31. Harvey A. Covid-19: medical schools given powers to graduate final year students early to help NHS. *BMJ* [Internet]. 2020 Mar 26 [cited 2020 Apr 4];368:m1227. Available from: <http://www.bmj.com/lookup/doi/10.1136/bmj.m1227>

32. Wang J, Mann F, Lloyd-Evans B, Ma R, Johnson S. Associations between loneliness and perceived social support and outcomes of mental health problems: A systematic review. BMC Psychiatry [Internet]. 2018 May 29 [cited 2020 Mar 19];18(1):156. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/29843662>
33. Singh A, Misra N. Loneliness, depression and sociability in old age. Ind Psychiatry J [Internet]. 2009 Jan [cited 2020 Mar 19];18(1):51. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/21234164>
34. National Health Supporters. National Health Supporters [Internet]. 2020 [cited 2020 Mar 20]. Available from: <https://www.nationalhealthsupporters.co.uk/>