

## LETTER FROM O O O O O

#### THE PRESIDENT

This wraps up the second and last MedSaint issue of the 2017/2018 year. It is also time for me to hand my position over to the next president as I leave St. Andrews, and can only hope they enjoy being part of this committee as much as I have the past year.

While bittersweet, all the members of the committee have had a fantastic semester writing articles, and creating weekly poll questions for you all. We've learned from our experiences over the past year, and put together articles highlighting our different interests, passions, and memories.

We hope you have a great time reading this issue (even if you're just using this as an excuse to procrastinate)! If you have any questions, please don't hesitate to shoot us a message on Facebook (MedSaint), or email medsaint1@gmail.com.

Thank you, again, to everyone on the committee, and to our authors for your hard work this semester!

Jodi



#### THE VICE PRESIDENT



#### Dear Reader,

The sun is shining, the birds are chirping, and the MedSaint Spring/Summer Edition has finally made its appearance. This edition marks a milestone for the committee as it wraps up the final works of the committee for the entire school year and, for the third year medics, indicates the approach of graduation and our farewell to the St. Andrews Medical School. Although the public only sees two distributions of magazines this school year, it took ongoing efforts from September to May for the committee to collect the content to create both magazines. Therefore to me, these two booklets are memoirs of each committee member's talents and efforts towards MedSaint for the entirety of the 2017-2018 school year, and I intend to keep these memoirs of which I am very proud of for as long as I can hold on to them for.

We wish the committee for the following year good luck, and I will be sure to follow up to see how the Medsaint magazine continues to evolve.

Adrienne

## LETTER FROM



















#### THE EDITOR

It looks like it's the sunset of my time in St. Andrews. It's a little hard not to be a bit sentimental, then, as I write my last letter as your editor. But it's been a joyride, and luckily we realised as we put this magazine together that there is a lot to celebrate this year. Accomplishments, milestones, and friendships. I am frequently impressed by the intelligence and humour behind the articles each semester. You can see kinship in the photos. And I hope you, the reader, can see that too. And that has been the most rewarding part of working on MedSaint - feeling that this magazine has captured a glimpse of a community. With our busy separate lives, I think that's important. So read on! And thank you for your support this year.







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## UP IN SMOKE- MEDICAL CONSIDERATIONS OF CANNABIS LEGALIZATION

The continued debate on the global trend of legalization of cannabis - its effects, medicinal benefits, and concerns

#### **By Sarah Gritis**

#### What's the Fuss About

If you're happy and you know it clap your hands. After all, you may represent roughly half of the public (47%) in the United Kingdom supporting the sale of cannabis through licensed shops (1). Perhaps you're also encouraged by the growing body of research highlighting the medical benefits of this plant, including the relief of chronic and neuropathic pain, and its use to alleviate insomnia and epilepsy (2,3,4,5). If you're not applauding, perhaps it's because you've heard that the use of cannabis during pregnancy may result in several adverse foetal and neonatal health consequences including pre-eclampsia and lower pre-term birth weight, which has been associated with an increased mortality in infants (6,7,8).

#### The Global Trend Towards Legalization

While the discord over the medical

benefits and risks of cannabis continues, its acceptance continues to grow worldwide. According to the United Nations Office on Drugs and Crime about 3.8 percent of the global population or an estimated 183 million people use cannabis by either inhaling or ingesting the drug to access the active tetrahydrocannabinol (THC) or cannabidiol (CBD) compounds known for their psychoactive and non-psychoactive effects (9,10). In Uruguay and Portugal, cannabis is now completely legal, while in countries such as the Czech Republic, Finland, Norway, the Netherlands, Spain and Greece cannabis is legal for medicinal use or decriminalized in some form (11,12). In North America, there are 29 US states that have already legalized medicinal cannabis and 9 of these have also legalized it for recreational use (13). Even the Canadian government is planning to become the first G7 country to

decriminalize marijuana in mid-2018, while 8 additional U.S. states plan further legalization (14,15).

#### How our Bodies Process Cannabinoid Compounds

While we may have mixed medical opinions over cannabis use, the trend towards further legalization makes it important for us as budding future doctors to know how this drug is consumed and processed within the body. Smoking, the most common method of use, also provides the highest bioavailability. By burning the dried plant, the naturally existing tetrahydrocannabinolic acid (THCA) decarboxylizes into THC (delta-9 THC) molecules, which then travel through the airway and into the lungs where they are absorbed into the bloodstream within minutes. The bioavailability of the THC/CBD ingredients, and how quickly the psychotropic effects are experienced are affected by various factors including potency, method of delivery, stomach contents, and interaction with other medications. One study found that inhalation resulted in bloodstream absorption rates of 10 to 45 percent, with bioavailability peaking 3 to 10 minutes after inhalation. Psychoactive effects and increased heart rate are experienced between 30 seconds and 2 minutes after inhalation, once THC reaches the brain, and taper off within 2 to 3 hours (16). Ingestion, the second most common method of use,

involves processing of the cannabis in the stomach's highly acidic environment. Although bioavailability is reduced, the remaining molecules are absorbed in the gastrointestinal tract and liver, which then metabolize the THC into 11-hydroxyl-delta-9-THC, smaller lipophilic molecules that eventually cross the blood-brain barrier. This results in a more prolonged psychotropic effect compared to inhalation with an absorption rate between 4 to 20 percent. The effects are experienced 30 minutes to 2 hours after ingestion, and last up to 8 hours (17,18). There are also cannabis-infused balms, oils and lotions that are absorbed through the skin for localized pain relief without the broader psychoactive effects.

#### **Should We Be Concerned?**

While cannabis provides medicinal benefits for the adult population in specific circumstances, the volume of evidence is mixed. For example, research reveals that infants from women who used cannabis during pregnancy were more likely to be placed in neonatal intensive care, compared to infants whose mothers did not use cannabis, and some trials even suggest that THC and CBD may be responsible for abnormal neurodevelopment issues (19,20). Clearly the jury is still out. There is limited information available regarding safe threshold limits, the effects of cannabis exclusive of other drugs, and the long-term outcomes in the offspring.

So, before we get too excited about the growing social and legal acceptance of cannabis, these data gaps should be addressed by government and health care teams to provide safer guidance to maternal women. Given that legislation trends will promote wider use of cannabis, it's time for better education and more focused research to comprehensively evaluate the long-term effects of cannabis, especially on foetal development and pregnancy outcomes.

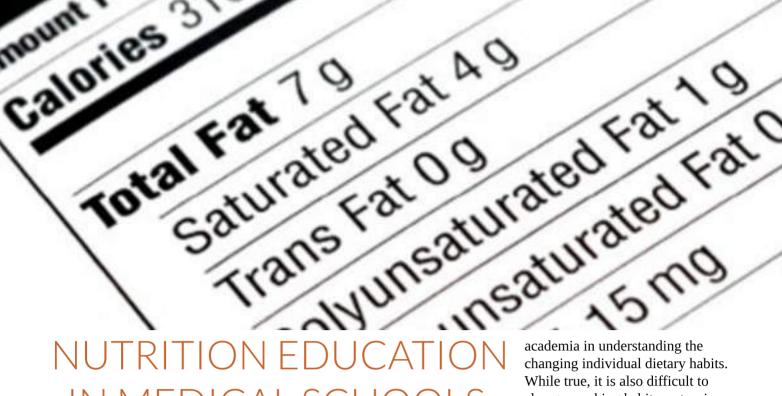
#### References

- 1. Grice A., 2015. Cannabis legalization: 47% support sale of drug through licenced shops, poll reveals. The Independent. April 9, 2016. Available from: http://www.independent.co.uk/news/uk/home-news/legalising-cannabis-47-support-sale-of-drug-through-licensed-shops-poll-reveals-a69767
- 2. National Academies of Sciences, Engineering and Medicine. 2017. The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research. Chapter 4. Available from: https://www.nap.edu/read/24625/ chapter/6.
- 3. Hill KP. 2015. Medical Marijuana for Treatment of Chronic Pain and Other Medical and Psychiatric Problems: A Clinical Review. JAMA. Jun 23-30;313(24):2474-83. Available from: https://:www.ncbi.nlm.nih.gov/pub med/26103031.
- 4. Russo EB, Guy GW, Robson PJ. 2007. Cannabis, Pain, ad Sleep: Lessons from Therapeutic Clinical Trials of Sativex, a Cannabis-based Medicine. Chemistry & Diodiversity. Volume 4, Issue 8:1729-1743. Available from: https://www.ncbi.nlm.nih.gov/pub med/17712817.
- 5. Porcari GS, Fu C, Doll ED, et al. 2018. Efficacy of artisanal preparations of cannabidiol for the treatment of epilepsy: Practical experiences in a tertiary medical center. Epilepsy & Behavior. Available from: https://www.ncbi.nlm.nih.gov/pub med/29429908.
- 6. El Marroun H, Tiemeier H, Steegers EA, *et al.* 2009. Intrauterinecannabis exposureaffectsfetalgrowth trajectories:TheGenerationRStudy. Journal of the American Academy of Child & Adolescent Psychiatry. 48:1173–81.
- 7. Horbar JD, Carpenter JH, Badger GJ, *et al.* 2012. Mortality andneonatal morbidity among infants 501 to 1500 grams from 2000 to 2009. Pediatrics. 129:1019–26.
- 8. McCormick MC. The contribution of low birth weight to infant mortality and childhood morbidity. 1985. New England Journal of Medicine. 312:82–90.
- 9. UNODC United Nations Office on Drug and Crime., 2017. World Drug Report 2013. https://www.unodc.org/wdr2017/field/Booklet\_2\_HEALTH.pdf. Accessed February 20, 2018.
- 10. Wolf L., Wolf M., 2016. The Medical Marijuana Dispensary. Pgs 42-45, USA: Althea Press.
- 11. Goni U., 2017. Uruguay, the First

- Country where you can Smoke Marijuana wherever you like. The Guardian May 2017. Available from:
- https://www.theguardian.com/society/2017/may/27/marijuana-legalisation-uruguay-seen-half-measure-users.
- 12. Masters S. 2017. Greece becomes sixth EU country to legalize cannabis for medicinal purposes. July 2017. Available from: https://www.express.co.uk/news/world/824491/Greece-legalises-cannabis-for-medical-purposes
- 13. Barcott, B., 2017. Marijuana Goes Main Stream. *Time*,52-53.
- 14. Power M. 2017. The wild west of weed: will legalization work for Canada. The Guardian. March 2017. Available from: https://www.theguardian.com/society/2017/mar/29/the-wild-west-of-weed-will-legalisation-work-for-canada.
- 15. Sanders L. 2018. Marijuana Legalization 2018: Which States Might Consider Cannabis Laws this Year? Newsweek. January 2018. Available from: http://www.newsweek.com/marijuana-legalization-2018-which-states-will-consider-cannabis-laws-year-755282
- 16. Grotenhermen F., 2003. Pharmacokinetics and Pharmacodynamics of Cannabinoids. Clinical Pharmacokinetics. 2003;42(4):327-60.
- 17. Brenneisen R, Egli A, Elsohly MA, et al. 1996. The Effect of Orally and Rectally Administered Delta 9-Tetrahydrocannabinol on Spasticity: A Pilot Study with 2 Patients. *International Journal of Clinical Pharmacology and Therapeutics*, 34(10). Available from:https://www.ncbi.nlm.nih.gov/pubmed/8897084.
- 18. Martin BR et al., 1999. Chemistry and Pharmacology of Cannabis. In: Kalant, H., Corrigall WA., Hall W., Smart RG., eds The Health Effects of Cannabis. Toronto: CAMH: 19-68.
- 19. Bonello, M.R., Xu, F.,Li Z., et al. (2014). Mental and Behavioral Disorders due to Substance Abuse and Perinatal Outcomes: A Study Based on Linked Population Data in New South Wales, Australia. *International Journals of Environmental Research and Public Health*, 11(5). Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4053897/.
- 20. Hayatbakhsh MR, Flenady VJ, Gibbons KS, *et al.* 2012. Birth outcomes associated with cannabis use before and during pregnancy. Pediatric Research. 71:215–19.

Image from:

https://www.thesun.co.uk/news/4094039/ille gal-smoke-cannabis-uk-weed/



# NUTRITION EDUCATION IN MEDICAL SCHOOLS, OR LACK THEREOF, AND WHAT STUDENTS CAN DO ABOUT IT

A scope on the importance of nutrition in patient health, and an exploration into its lack of emphasis in medical schools.

#### **By Vidur Kapur**

"In 2016, suboptimal diet was the second-leading risk factor for deaths and DALYs globally". This alarming statistic comes from the Global Burden of Disease Study, published in *The Lancet* (1). Despite this, the evidence suggests that medical students know or are taught very little about diet and its impact on health. In the US, for instance, a study published in 2015 found that "most US medical schools (86 of 121 schools, or 71%) fail to provide the recommended minimum 25 hours of nutrition education; 43 (36%) provide less than half that much" (2).

While we often touch on diet when learning about hypertension, atherosclerosis and coronary heart disease, cancer, obesity, diverticular disease and Type 2 diabetes

mellitus, we rarely learn about the mechanisms by which diet and its different components are thought to have an impact on these health problems. And in most cases, it is assumed that we know what a "healthy diet" is.

When it comes to drugs – as we all know – there is no aversion to insisting that medical students learn the intricate and detailed mechanisms by which things we put in our mouths are thought to work. Perhaps this is because the mechanisms are better understood? Not so: we learn about how the influenza drug, oseltamivir, works despite its dubious efficacy.

A more understandable reason not to include much about dietary patterns in the curriculum could be attributed to the difficulties in academia in understanding the changing individual dietary habits. While true, it is also difficult to change smoking habits, extensive research and effort has been put into finding ways to improve behaviour change in that domain. Moreover, there are almost certainly cases in which *patients* go to their general practitioners to ask for dietary advice, only to find that the general practitioners are almost as ignorant as they are on the subject (3).

The simplest – and likeliest – reason is that the medical school curriculum is already loaded with content. More information would only serve to further overwhelm medical students. This concern is noted by the Intercollegiate Group on Nutrition (ICGN) of the Academy of Medical Royal Colleges, which developed a medical undergraduate curriculum in nutrition to make up for the lack of guidance given by the GMC, despite the explicit requirements in 'Outcomes for Graduates' for doctors to have knowledge of nutrition (4). Despite this concern, I aver that, given the importance of diet in the prevention of chronic disease, it is essential that medical schools across the country rethink their curricula and adopt the guidance given by the ICGN.

Meanwhile, what can medical students do to educate themselves on the subject of diet, both for their own health and that of their future patients? We can split this endeavour into two components. Firstly, learning what a "healthy diet" consists of, and secondly, to attempt to understand the scientific rationale behind this. Superficially, the former task appears to be considerably less formidable than the latter. Yet, it was not until very recently that the lines between these two questions were blurred, with public health messages being aimed at specific nutrients. Indeed, it is still the case that headlines and opinion pieces abound with messages such as "reduce fat!", "reduce saturated fat!" and "eliminate sugar!".

Naturally, researchers and doctors who disagree with whichever nutrient was being "demonised" produce counter-pieces, which confuses the public. Diet is also an issue where many people appear to be incredibly emotionally invested, and so adherents of 'fad' diets took it as a personal attack if their diet was said to be implicated in poor health.

More recently, however, researchers have attempted to reach consensus. In 2015, a conference was held in Boston, Massachusetts, and brought together the world's leading nutrition experts, ranging from advocates of a vegan diet to advocates of the 'paleo' diet. They agreed that, at least in the public sphere, the message should be centered around dietary patterns, not around nutrients which the public will find it difficult to control or monitor in their everyday lives.

They also lent their support to the following statement:

"a healthy dietary pattern is higher in vegetables, fruits, whole grains, low- or non-fat dairy, seafood, legumes, and nuts; moderate in alcohol (amona adults): lower in red and processed meats; and low in sugar-sweetened foods and drinks and refined grains." (5)

One particular named dietary pattern that they endorsed is the Mediterranean Diet – arguably the best-studied dietary pattern in the literature; indeed, it is one of the only diets to have been tested in randomized control trials (RCTs). As to why they believe that this dietary pattern reduces the risk that people will develop the chronic diseases mentioned at the start, that's for you, armed with your knowledge of evidence-based medicine, to discover.

Finally, even if medical schools do not change, positive developments have, thankfully, been occurring in the last year or so, in response to the outcry from both practicing doctors and medical students about the lack of nutrition education in medical schools (6). For example, Nutritank societies have now been set up in over 15 UK medical schools by medical students themselves, "to raise awareness around the importance of nutrition and lifestyle medicine" (7). Let's hope that other medical schools, including St Andrews', would follow suit.

References

- 1. GBD 2016 Risk Factors Collaborators, Global. regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016, The Lancet, 2017; 390(10100): 1345-1422. Available at: http://www.thelancet.com/journals/lancet/ article/PIIS0140-6736(17)32366-8/fulltext
- 2. Kelly M. Adams, W. Scott Butsch, and Martin Kohlmeier, "The State of Nutrition Education at US Medical Schools," Journal of Biomedical Education, vol. 2015, Article ID 357627, 7 pages, 2015. doi:10.1155/2015/357627.
- 3. Denis Campbell, "Doctors 'know too little about nutrition and exercise", The Guardian, 19thOctober 2016. Available at: https://www.theguardian.com/society/2016/oct/19 /doctors-know-too-little-about-effects-of-nutrition
- 4. Academy of Medical Royal Colleges Intercollegiate Group on Nutrition. Accompanying notes to UK Undergraduate Curriculum in Nutrition, 2013. Available at: http://www.aomrc.org.uk/wp-content/uploads/ 2016/08/Undergraduate Curriculum Nutrition Accomp\_Notes\_0213-2.pdf
- 5. Oldways Common Ground Statement on Healthy Eating, 2015. Available at: https://oldwayspt.org/programs/oldways-commo n-ground/oldways-common-ground-consensus
- 6. Sheila Dillon, "We learn nothing about nutrition, claim medical students", BBC News, 25thMarch 2018. Available at: http://www.bbc.co.uk/news/health-43504125
- http://nutritank.com/medical-schools/

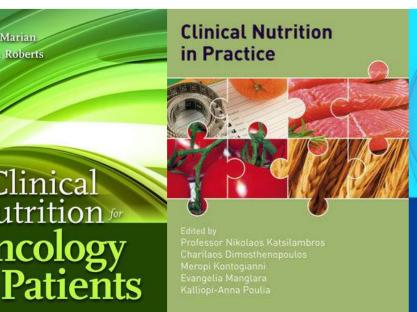
https://www.cbsnews.com/news/nutrition-facts -labels-often-ignored-whats-the-fix/

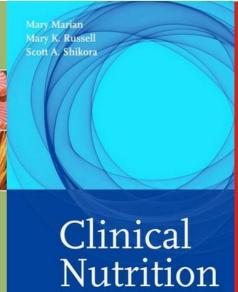
http://www.jblearning.com/catalog/97807637551

https://www.wiley.com/en-us/Clinical+Nutrition +in+Practice-p-9781405180849

https://psb-book.ga/projects/epub-ebooks-downl oad-clinical-nutrition-for-surgical-patients-bymary-marian-pdf-0763738816.html

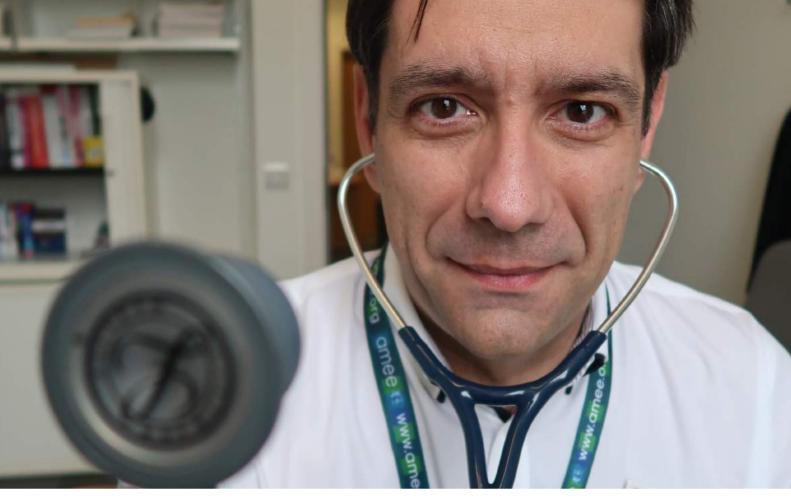
https://www.pinterest.ca/rhiannds/books-worthreading/







MEDSAINT



## A CLOSER LOOK AT OSCES WITH PREDRAG TOPTIPS AND MARKING SCHEMES

#### By Jodi Chiu

When it comes to OSCEs, Predrag knows it all. Welcoming us into his office 2 minutes early for our interview slot, his punctuality and immaculately uncluttered space reflects the order behind our annual clinical skills examinations.

Since 1997, while the majority of

us were still not born, Predrag has been working to perfect clinical skills at St. Andrews... so we think he's got OSCEs pretty much figured out.

With the prospect of May OSCEs looming over our heads, I'm sure a lot of us are beginning to scramble for our notes and

mini-CEX forms. As such, we thought we'd ask the master behind it all for 6 top OSCE tips on behalf of all first to third year students...

### 1. "Let's start with dress code... occasionally we see students dressed like they've just come out from the bed."

Appearance plays a critical role in setting the scene, before you even press the pump of the hand sanitizer to wash your hands, and introduce yourself for the first time... so make sure you have your Oxfords polished, buttons all done up, and shirts tucked in. "You want to be presentable to create trust between you and the patient, and represent our profession in the right way."

#### 2. "Your communication skills are very important to your patients."

In our time-constrained stations, Predrag stresses the importance of balancing history-taking with empathy.

"You really need to find out why the patient has come to see you to gain appropriate information... but you also can't just be a machine and fire questions at them. You need to interact with the patient as well."

Predrag also reminds us about the strength of body language — what you do with your hands and feet, and how you are sitting can completely change the patient's perspective of your attitude.

In addition to communication tips for a standard history-taking session, we addressed a common concern: that the difficulty of a station can differ depending on the simulated patient in the room. What do you do when you get the angriest, most tearful patient during a communication skills station of your OSCE?

Predrag reminds us to try to understand the patient's feelings — where they are coming from — and to tackle these emotions to reassure the patient.

"Showing empathy towards the

patient, and creating rapport is very important."

These tips also apply to practical procedures and examinations.

"Occasionally, we see students just memorizing, looking at the ceiling, looking around, looking at anything but the patient" – so remember to interact with the patient. Don't just ramble on a list of symptoms you'd be looking or feeling for when inspecting and palpating. Rather, talk to the patient and tell the patient what you're about to do to them.

#### 3. "Apply the knowledge. Don't just 'dance the dance."

With pathology implemented into the MD4003 module, this is especially important for third years.

"Big scar on the tummy... only 10-15% of students comment on it... If you see the scar, you need to see the scar. Don't just ignore it!"

Because OSCEs are the gold standard for objective testing for clinical skills, they will continue coming up in our post-graduate years, so it's vital we start applying our knowledge early-on.

"You are still doing the monkey job

you can repeat what's next, but
you aren't applying the knowledge."

## 4. "Stress is something you need to put away. Some students mess up one station, then mess up the rest."

In the words of Predrag, "panic is the worst." He reminds us to look at the stations compartmentally. Even if the previous station didn't go as planned, it's vital to put your energy towards making the next examination better than the last.

"We won't penalize you if you fail one station. You won't fail the entire OSCE. We are looking at performance across the board, which is especially applicable for 3rd years."

He also reminds us to remain calm, always organizing our thought process around the 4 basic steps of examination:

- 1) Inspection
- 2) Palpation
- 3) Percussion
- 4) Auscultation

"If your mind goes blank, go from these 4 steps and think from there."

Finally, he reassures us that it is not the end of the world if we don't get blood in the tube during venepuncture, or the patient's systolic and/or diastolic during blood pressure. "Examiners are looking for your psychomotor skills, so focus on that."

#### 5. "If you forgot to perform any skills and remember later-on, offer to perform."

A short, but helpful tip... thankfully, as long as the skills are executed

within the bells of the station, Predrag reassures us that marks will be allocated appropriately, because it's all a check-list.

#### 6. But at the end of the day, "practice makes perfect."

"Practice will make you master of the skill, no matter what you are doing in life."

He urges us to practice in the MRC, where all the equipment is available, and to film videos for the portfolio

tasks.

Within the first minute of a station, examiners can predict our performance. This verdict comes from observations of simple tasks, like checking the expiry date of

products, adjusting the height of the bed, or even using the little torch on the trolley. "Obviously, you haven't used it if you're fiddling around for 10-seconds not knowing how to switch it on."

#### The OSCE Marking Scheme-Borderline Regression Method

"While a lot of anxiety revolves around the performance at the time of the OSCE, many of us remain nervous about the most minute details leading up to the release date of our marks – "I forgot to do this one skill," "I don't think the patient liked me," "that station went horribly," or "the examiner didn't smile at me at the end of the station... did I fail?"

Thankfully, Predrag gave us a bit of reassurance by explaining the background analysis of OSCE results.

Final marks are tallied using the "Borderline Regression Method," which is standardized across the UK. This bases your results on two gradings: your "checklist score" and the "global rating." Your checklist

score reflects your completion of 'tick box' skills during the station — if you did the skill, you get the check mark, so this is purely objective. Global rating, on the other hand, is purely subjective. Each examiner, at the end, will ignore all tick boxes, and use their clinical expertise to judge your performance, allocating you an appropriate level: clear fail, borderline fail, borderline pass, clear pass, or excellent.

Below is a diagram (kindly provided by Predrag), explaining the marking scheme.

Yes, this does mean that examiners play a factor in the final score for a particular station; however, an examiners' subjective impression does not completely determine your performance. Using this regression method, the computer calculates the objective checklist against the subjective impression to determine

your score. The pass score is set by looking at all students' execution on that station, and how they do against the subjective impression of the 3 or 4 examiners.

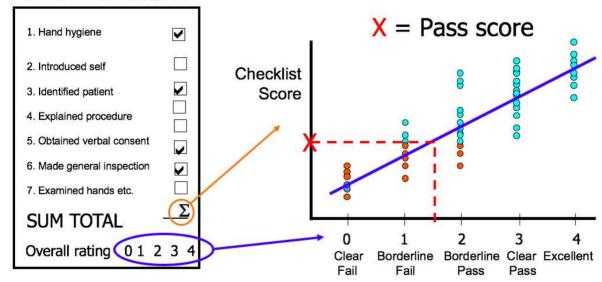
This same principle applies with simulated patients as well — even if a patient is more difficult than another, your cut point won't be determined solely by the subjective impression of the patient. Rather, the patients contribute to your check mark score. So while you may be more frazzled trying to get through your history with (for example) an angrier patient, just aim to get through the checklist after calming your patient down, and don't be so caught up simply trying to appease them without taking the history!

We hope this has helped with your OSCE revision – good luck!

Image from: https://www.uclan.ac.uk/about\_us/facilities/clinical\_skills\_labs.php

#### **Borderline Regression Method**

#### **Checklist Score**





## WOULD YOU LIKE AN AUTOGRAPH ON YOUR LIVER, SIR?

Dr. Simon Bramhall - the 'liver branding surgeon' who carved his initials 'SB,' 4 cm high, on the livers of two patients.

SB Was here

By Puroshini Pather

Hello there.

Are you perhaps interested in liver, spleen, or pancreas surgery? Then Dr. Simon Bramhall is the perfect doctor for you! You can have your surgery done, and receive a *free* signed autograph from the doctor himself!

What do you mean you didn't want said autograph burned into your liver? Well this is awkward...

The Royal College of Physicians defines the nature and role of professionalism among the medical profession as: "A set of values, behaviours, and relationships that underpins the trust the public has in doctors" (Doctors in Society: Medical Professionalism in a Changing World, 2005).

In 2013, Dr. Simon Bramhall, a 53- year old Liver, Spleen and Pancreas surgeon decided that after 12 years of boring surgery, he wanted to make his mark on the world at the Queen Elizabeth Hospital in Birmingham. And what better way to do it than to use an argon beam to carve his initials (SB) into two of his patients' livers after surgery?

Argon plasma coagulation (APC), used for the past three decades in open surgery, is an electrosurgical technique that provides noncontact monopolar electrothermal haemostasis. No systemic effects occur after coagulation and the liver is, for all intents and purposes, not impaired in any way. Further, the patient suffers no ill effects from the carvings on the liver.

Dr. Bramhall's practices in theatre - unusual to say the least - were uncovered by another surgeon doing follow up surgery on one of the patients. He was able to take a picture on his mobile phone of the four-centimeter high *SB* initials.

#### Why did he do it?

Dr. Bramhall burnt his initials into newly transplanted livers. Not once, but twice – an act borne of happiness and relief at a procedure gone well? Or tiredness and stress? Surely not! As to why he did what he did, Dr. Bramhall says he

made a mistake and that he was extremely tired and under tremendous stress and perhaps his good medical judgment was a tad impaired by euphoria after performing a grueling, but successful liver transplant. Accounts from the attending nurse were that he flicked his wrists and in a *flash* the argon beam had carved out *SB*.

The judge, while accepting of this argument, held that Bramhall's conduct was "born of professional arrogance of such magnitude that it strayed into criminal behavior".

#### So what was the verdict?

Dr. Bramhall was given a twelve-month community service order of 120 hours of unpaid work, and a fine of £10 000. Upon awarding the fine and unpaid community service the court further reiterated: "What you did was an abuse of power and a betrayal of trust that these patients had invested in you".

In 2017, the General Medical Council (GMC) issued a formal warning to Dr. Bramhall to cease and desist from future indulgences of similar ilk, saying that his professional medical conduct had fallen short of that required by the reasonable medical surgeon-practitioner.

The GMC stopped short of striking Dr. Bramhall off the roll, since no permanent physical harm was done to the patients (although there were reports of the patient being traumatized, and experienced feelings of being psychologically violated by the surgeon), and they (the GMC) were probably at a loss of how to handle this situation. Carving one's initials into a patient's liver has never been discovered before, making Dr. Bramall famous in his own, strange right.

He has since resigned his post at the Queen Elizabeth Hospital in Birmingham, and is said to appear somewhat contrite as a NHS-employee in Herefordshire. But for how long until he decides to make his mark again? We can only wait and see...

Image from: http://www.herbal-health.uk/body-faq-where-is-the-liver-why-is-it-ac hing-more/

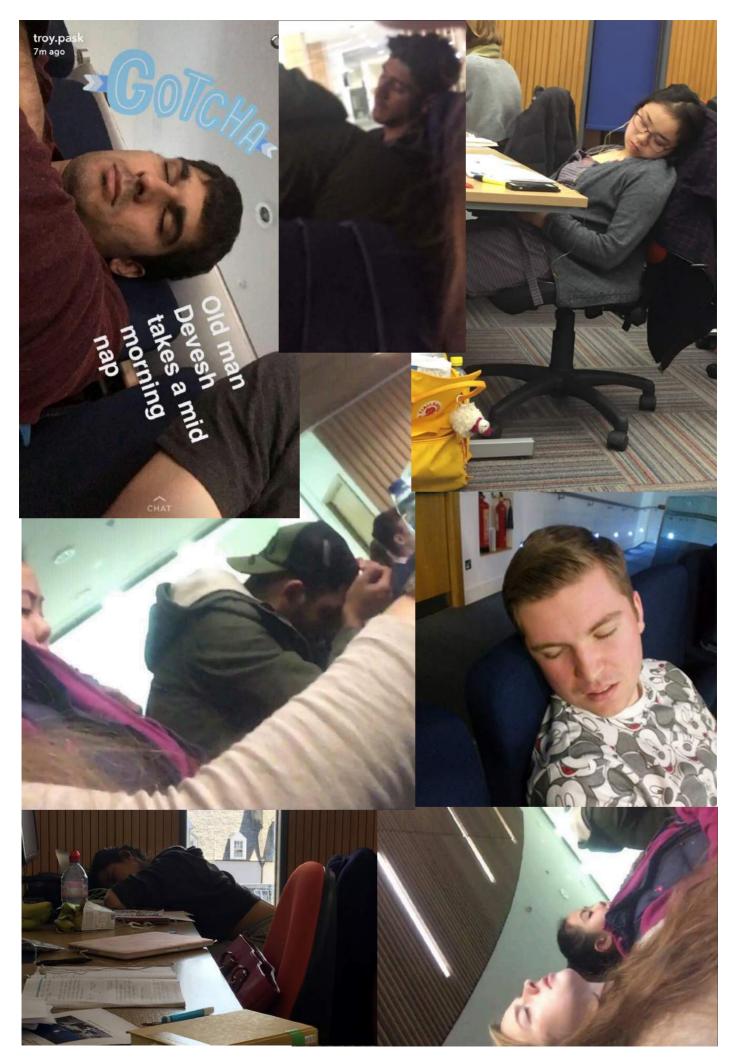
## NAPCAM

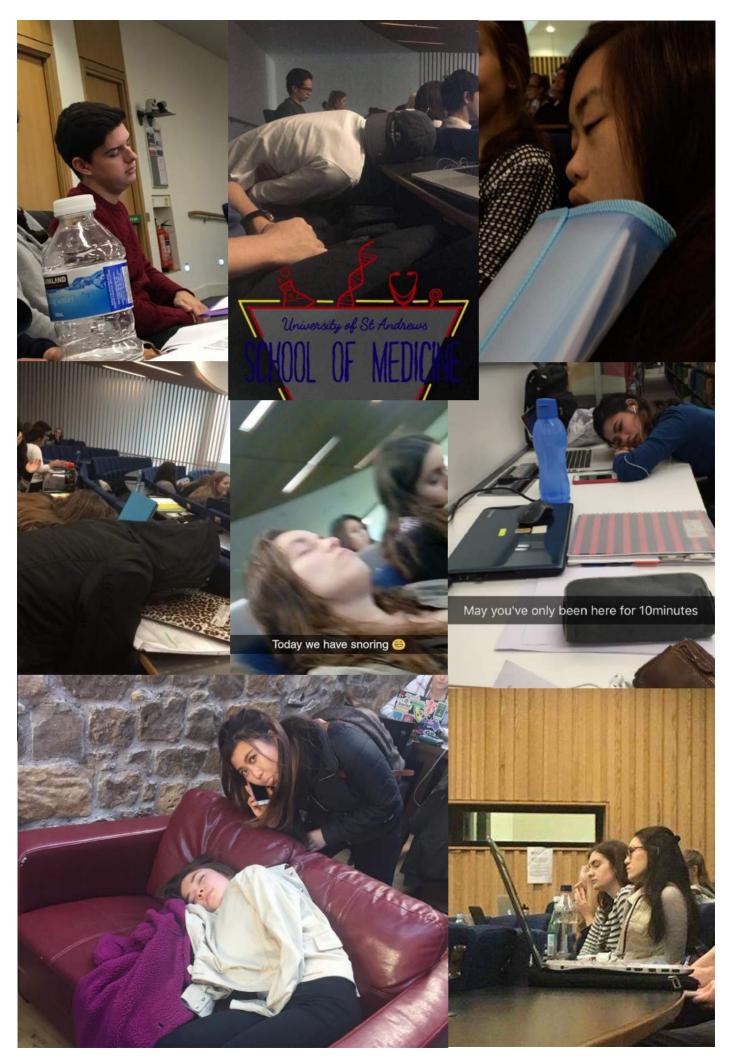
We are just simply acclimatizing ourselves to sleeping in odd places in preparation for our foundation years.

Submitted by your fellow classmates.









## WILL CRYONICS EVER BE BROUGHT TO LIFE, AND WHAT ARE THE POTENTIAL IMPLICATIONS?

#### By Sammir Bushara

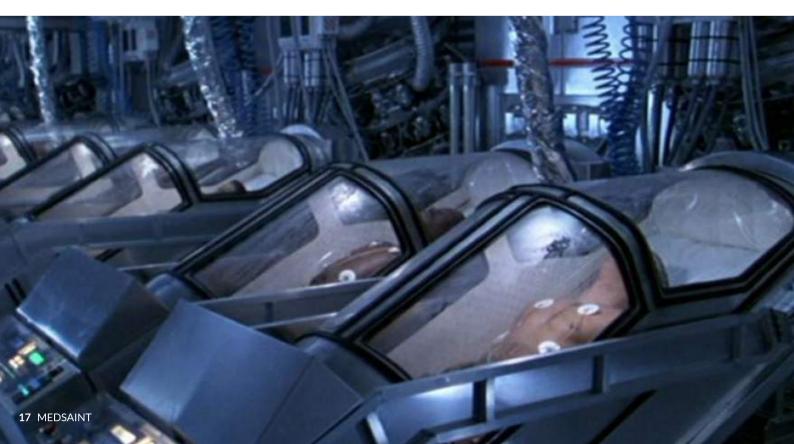
#### WHAT IS IT, AND WHERE ARE WE NOW?

It is a fantasy which has captured the imaginations of sci-fi film directors, transhumanists, and super-rich seekers of immortality. Cryonics, the practise of 'freezing' a dead body in the hope that it can be revived in the future, has been attempted for more than half a century. As of today, more than 300 people have undergone the procedure (1), yet the possibility of revival is met with general skepticism from the scientific community.

There are currently four active cryonics facilities worldwide. One is in Russia, while the other three are in the United States (2). Within them, the deceased are stored in canisters of liquid nitrogen at temperatures as low as -200°C. The currently used procedure to bring them to this state of 'suspended animation' is as follows (3). As soon as possible after death (a professional is often kept on standby), the body is immersed into an ice bath to ensure a gradual reduction in temperature. Artificial circulation of oxygen is maintained to prevent hypoxic damage, particularly of the brain. The next step is vitrification, which first requires the replacement of bodily fluids with a 'cryoprotective agent' to prevent ice crystal formation (which is damaging to cells), followed by cooling. The

cryoprotectant is injected into the bloodstream, and works by increasing the viscosity of fluids within the body and reducing freezing temperatures. The final process of cooling takes several days, while the body is stored in a container into which liquid nitrogen is fed.

One area where cryopreservation has already been put to some practical use is in the preservation of tissue for medical purposes. A challenge which this has demonstrated is the delicate balance between the risk of freezing damage and the damage caused by often-toxic cryoprotectant chemicals. In smaller tissues, a smaller dose of cryoprotectant is required and therefore has been





applied to the 'freezing' of gametes and embryos, for example. However, there has been some research progress on this front. The Twenty-First Century Medicine company has managed to vitrify a rabbit kidney at -40°C with a newly-developed cryoprotectant mixture, and successfully transplant it to a healthy rabbit(4).

## ARE THE BARRIERS TO REVIVAL INSURMOUNTABLE, OR ARE WE DEVELOPING SOLUTIONS?

The hope of proponents of cryonics is that technology could develop to the point where solutions for revival can be conceived. At the very least, the aim is for some semblance of the patient's 'identity' or conscious being to survive the process through restoration of viable brain tissue (i.e. avoiding 'information-theoretic death'). The remainder of the body can, in theory, be replaced through bionics or transplantation. The main challenge proposed lies in the reversal of three causes of damage to brain tissue: the cooling process itself (ice and cryoprotectant damage), hypoxia to the brain occurring between legal death and preservation, and the initial cause of the death.

Perhaps irreversible damage has already been done by hypoxia and the vitrification process, even with the possibility of advancements in unproven whether the current process of vitrification can keep the structural and, to greater doubt, the molecular components of brain functions intact which are considered integral to the 'identity' of an individual. These include long-term memory, which is thought to include elements as fragile as states of gene regulation, and how molecules are distributed within a cell. According to an article by Michael Hendricks in the 'MIT Technology Review'(5), the technology to preserve these 'does not exist yet even in principle'. The fact that larger organs are less likely to be viable after cryopreservation is somewhat discouraging (a different vitrifying mixture was required for the rabbit kidney). The Alcor Life Extension Foundation, a cryonics institute, is more optimistic. They cite a piece of research on the nematode worm *C. elegans* to support their position (6). The worms were vitrified and assessed for the retention of a certain memory function, 'odorant imprinting', which is based on smell. It was found that the basic mechanisms were 'not modified' by vitrification. However, this was on an organism with a relatively simple nervous system, and on a single memory function (the mechanism of which could be easier to preserve than of others). This is by no means proof

that the use of current vitrification techniques can be translated to the myriad of functions which constitute memory in the significantly larger, more complex, brains of humans.

Conceivably, if it is proven that the current means of vitrification (and not necessarily brain hypoxia) is irreversible even with technological development, there could be hope for future 'patients' in the development of improving preservation techniques. The progress shown in the case of the rabbit kidney, perhaps somewhat optimistically, could be extrapolated with time to the complexity of human brains. This could involve the use of less toxic cryoprotective agents and a more efficient cooling system, or an alternative means of preservation entirely. One area of development which is being considered both as a means of improving the preservation process and as a means of reversing brain damage is nanotechnology. It has been suggested that nanotechnological methods, such as 'microfluidic channels' can be used to deliver cryoprotective agents in smaller total doses without compromising on effectiveness (7). Alcor takes this further and suggests that 'mature' nanotechnology can be used for 'very sophisticated repair strategies'(8). It cites a few articles written by cryonicists to suggest

how this may work in theory, though they are currently unsupported by experimental research.

#### WHAT IF REVIVAL BECOMES REALITY?

It would take a great deal of speculation and suspension of many scientifically-founded doubts on the viability of the field to imagine the possibility of a distant future where 're-animation' from the vitrified state becomes possible. But let us suppose this does occur. Such a radical change in our concept of death would elicit too many ethical questions to explore in much detail here. For example, who would be revived first, and would it be better to wait for further improvements in technology in higher-risk cases? If proven to work, how would cryopreservation 'repair' technology be distributed - would this theoretical 'elixir of life' remain the domain of the super-rich who can currently afford to be cryopreserved in the long-term? Or could it be accessible in an equitable manner to all, but at a high social cost for a potentially low rate of success? Would it be justifiable to use premature 'euthanasia' to increase the chances of its success?

#### **CONCLUSION**

Perhaps it is appropriate to conclude with a blunt medical opinion on the subject as it is now. "Cryonics has risks for the patient, poses ethical issues for society, is highly expensive, but has no proven benefit. If this was a drug, it would never get approved.", says Dr. Channa Jayasena, a senior lecturer at Imperial College London (3). The speculative world of cryonics, however, is in a post-mortal domain where

there is nothing to lose and all to gain – a far cry from mainstream medicine, where evidence for efficacy is integral to any intervention. It seems that proponents of cryonics are unlikely to give up without proof to the contrary. Convincing them of the 'impossibility' of their dream, in an age defined by ground-breaking technological progress, proves rather difficult.

#### **Sources:**

- 1. The cryonics dilemma: will deep-frozen bodies be fit for new life? | Science | The Guardian. The Guardian. https://www.theguardian.com/science/2016/nov/18 /the-cryonics-dilemma-will -deep-frozen-bodies-be-fit -for-new-life. Published 2016. Accessed April 11, 2018.
- 2. Inside the weird world of cryonics. Financial Times. https://www.ft.com/conten t/d634e198-a435-11e5-87 3f-68411a84f346. Published 2015. Accessed April 11, 2018.
- 3. What is cryogenic preservation? -CNN. 2016. https://edition.cnn.com/20 16/11/18/health/how-cryo preservation-and-cryonics -works/index.html. Accessed April

- 11, 2018.
- 4. Fahy GM, Wowk B, Pagotan R, et al. Physical and biological aspects of renal vitrification.

  Organogenesis. 2009;5(3):167-175. http://www.ncbi.nlm.nih.g
  ov/pubmed/20046680. Accessed
  April 11, 2018.
- 5. Hendricks M. The False Science of Cryonics MIT Technology Review. MIT Technology Review. https://www.technologyreview.com/s/541311/the-fal se-science-of-cryonics/. Published 2015
- 6. Vita-More N, Barranco D. Persistence of Long-Term Memory in Vitrified and Revived Caenorhabditis elegans. *Rejuvenation Res*. 2015;18(5):458-463. doi:10.1089/rej.2014.1636
- 7. Guven S, Demirci U. Integrating nanoscale technologies with cryogenics: a step towards improved biopreservation. *Nanomedicine* (*Lond*). 2012;7(12):1787-1789. doi:10.2217/nnm.12.158
- 8. Alcor Life Extension Foundation. Scientists' Cryonics FAQ. http://www.alcor.org/scien cefaq.htm#imperfect. Accessed April 11, 2018.

Images from:

https://www.prindlepost.org/20 16/12/life-death-cryonics/

http://www.abc.net.au/news/20 16-11-24/cryonics-hype-hope-o r-hell/8050278

http://longevityfacts.com/advancements-cryonics-revive-bodies-freezing/





Bute Ball, February 2018



National Conference Paediatric Surgery, April 2018



Society Awards, April 2018



Bute Ball, February 2018



Dr. Ben Goldacre comes to St. Andrews, April 2018



Bute Ball, February 2018



Bute Ball, February 2018



Dissertation done!, April 2018



March 2018



National Conference Paediatric Surgery, April 2018



National Conference Paediatric Surgery, April 2018



Great Bute-ish Bake Off- April 2018



Dissertation done!, April 2018



Bute Ball, February 2018



Great Bute-ish Bake Off, April 2018



Bute Bonanza, April 2018



Bute Ball, February 2018



Great Bute-ish Bake Off, April 2018



Bute Ball, February 2018



## SPECIAL SEGMENT WITH DR. ALUN HUGHES

#### By Chelsea Chan

My first impressionable meeting with Dr. Alun Hughes was also the first time I ever stepped into the dissection room.

It was the first time that I had ever seen cadavers, and it had all been going quite well until I spotted some bubblegum pink nail varnish on a stiff grey-green finger poking from underneath the cloth. Now, that was just a bit too real. Fortunately, Dr. Hughes and the university chaplain, the Rev Dr. Donald MacEwan, were not far away, sentry-like for swooning medical students.

This, perhaps, is what comes to mind when considering what a Director of Teaching does. Lectures about S-coding, and frequent sightings of Dr. Hughes going up and down the medical school stairs come to mind also. But presumably, no one can describe his career path better than Dr. Hughes himself.

When Dr. Hughes first started out in academia as a PhD student in Aberdeen, the ratio of his work was close to about 80% research, and 20% teaching. Dr. Hughes participated in a range of research projects, including projects in the field of musculoskeletal research. Despite an affinity for research, this ratio began to change.

"I realized that teaching was the part I got the most satisfaction from. I taught at the BSc intercalated degree they still do in Aberdeen, as well as some clinical pharmacology courses, so I figured it would be nice to switch it around and do 80% teaching and 20% research."

Nowadays, however, the last 20% has "disappeared out the window." As part of his Director of Teaching role, Dr. Hughes's job revolves primarily around teaching. This is because teaching gives Dr. Hughes the most immediate gratification.

"It gives you immediate return, in that you can see if you've conveyed something effectively – you can tell by the looks on people's faces."

#### YOU HAVE TO BE NOT AFRAID TO PUT UP YOUR HAND AND SAY, THIS IS SOMETHING I WANT TO DO.

I was a little shocked to hear that lecturers paid attention to their audience. It was akin to finding out that your television watches you back. So how does Dr. Hughes know whether a student is thinking about cardiac physiology or how they're going to perfectly sauté their prawns for dinner?

"Eye contact. I'll end things with something that sounds like a question, like, 'does this make sense?' And that's the difference between someone who goes 'yeah, that *does* make sense' and someone going – (Dr. Hughes made his best impression of a very confused student.) You can tell the difference between you startling someone because they're miles away, and someone who looks like they've been in deep concentration."

WE DON'T HAVE A PROBLEM TEACHING MEDICAL STUDENTS, WE HAVE AN AIM OF DELIVERING THE BEST EDUCATION WE CAN FOR YOU.



Dr. Hughes's hobbies include refereeing roller derby, which allows him to travel around the world. Picture taken by Stephane Faraut.

Does Dr. Hughes have any tips for those interested in teaching?

"You have to be not afraid to put up your hand and say, this is something I want to do, and find ways to get that experience. I've got a friend who's got a very good saying, that goes 'no milk for shy bairns.' Which is true. If you want to do something you've got an interest in, the only way that you can find out if you can enjoy, is by doing it."

Dr. Hughes was sure to point out that lecturers are more nervous than we students would expect. It is the desire to give a good lecture that makes Dr. Hughes nervous. To beat the nerves, he practices his lecture — whether that means in front of his cats, or in the lecture theatre to get a sense of the space, as he did when he started out in St. Andrews.

I also wanted to ask Dr. Hughes if there were any stories of lectures or presentations that hadn't gone as well. Surely, in every success story there is a funny anecdote. In Dr. Hughes's case, he was presenting research at a time where instead of USB sticks, 35mm slides were manually inserted into the projector.

"In the first international conference I went to, the previous person's talk got stuck in the projector, so I had to give essentially an entire presentation without slides. That was probably the most embarrassing and awkward presentation I had to give. The first time you are giving an important talk in front of world-renowned experts, and you are essentially miming what a graph looks like."

When we asked what part of his job was the most challenging, it wasn't in fact the basic job requirements that were the most difficult, but as Dr. Hughes put it, the "firefighting."

"That's what I find challenging — what you can't plan or prepare for as Director of Teaching, or teaching with the weather conditions. This kind of stuff is quite challenging, you can't sit down, put it into your diary and wait for it happen. <sup>2</sup>

The rest is part of the job. So maybe I don't see it as a challenge because that's the part I actually enjoy. We don't have a problem teaching medical students, we have an aim of delivering the best education we can for you."

And despite Dr. Hughes's focus on teaching, he and his team also pay particular attention to how teaching is given at St. Andrews. One unique feature of the medical school that Dr. Hughes was proud to talk about was the ongoing medical research at St. Andrews. The research community here boasts not only front line wet lab research, but also a

range of research exploring the most effective way to teach and assess medical students. The research is carried out by researchers in the School of Medicine as well as third year students as part of their dissertation projects. It is safe to say that the newest research is translated into how teaching is delivered at St. Andrews.

It may occur to students that individual research has very few far-reaching effects, but Dr. Hughes was in defense about the importance of research:

"If you take all the knowledge that the world knows, your research is a very fine little point pressing against the outside of that sphere that pushes it forward by a little milliliter. But knowing that you're part of a process that is gradually increasing a totality of knowledge is rewarding."

But how does one stay motivated when progress can only be acquired by the milliliter?

## YOU NEED TO LEARN TO EMBRACE THE UNCERTAINTY OF LIFE AND KIND OF ACCEPT THAT'S WHAT GIVES IT FUN.

"The frustrations are that by the very virtue of making a hypothesis, you are exploring if something holds true, and it doesn't always hold true. The best hypothesis can have flaws, and you can spend a very long time researching it. But if you're a problem solver, and you like that kind of drive of 'how do I get around this,' it becomes a motivator."

Considering that his career has currently taken him away from research, are there any regrets?

"Absolutely not. There have been things that were frustrating at the time that I haven't enjoyed as much, but at the same time, they've all been experiences that got me to

<sup>1</sup> This philosophy is best represented by two great quotes that Dr. Hughes shared with us that day – the first being 'no milk for shy bairns,' and the other being 'try it before you buy it' (because unlike ASOS, life offers no free returns)

<sup>2</sup> A fair point. It is unlikely anyone put the 2018 spring blizzard into their diaries. It certainly seems Tesco did not.

<sup>3</sup> Dr. Hughes cited one more challenge – understanding the student experience as one grows gradually away from their own university years. But it is a challenge that is addressed – through the outstanding work of the SSCC and Dr. Hughes's rigorous research into pop culture.

where I am now. And I really enjoy my job. I wouldn't change it. I've watched too many science fiction films where people have messed around with time machines, and that has gone horribly wrong."

Yep. The moral of the story is usually to not mess around with time. After all, those science fictions present a tantalizing narrative where we could have the power to change a decision with the foresight of the future. But as Dr. Hughes can attest to, uncertainty of the future is a quintessential experience of getting through life. It is an unavoidable facet of life, especially as many of us approach a crucial time in creating our careers, but one that Dr. Hughes suggests we can learn to appreciate.

"I think the uncertainty never goes away. It's something to be aware of, and at some point you get used to that being a part of your life and that's okay. You need to learn to embrace the uncertainty of life and kind of accept that's what gives it fun."

And despite the uncertainty, as Dr. Hughes found, things turned out the best possible way.

"As long as it's what you want to do, and you're enjoying what you do, at the end of the day, that's the best thing, isn't it."

And evidently Dr. Hughes has found a great number of things that he enjoys – including refereeing roller derby, which has allowed him to feed another passion – travel.

"In the last few years, I've been to most Scandic and Nordic places, US, Canada, and around the UK, and places just because of roller derby. It's a good excuse for a holiday, but also a good excuse for a holiday."

His office offered other clues as to his different hobbies. There is a great big colourful poster in Dr. Hughes's office, which I found out was a reminder of when Dr. Hughes moonlighted as a DJ, and designed similar posters.

I had a double take. Dr. Hughes – a DJ? Did that make him DJ Hughes? Or Dr. DJ? (Sadly, no.) What kind of gigs did he run? (Indie night and goth night). *Goth night?* ("I was quite a goth. I used to have exceptionally long hair, until I got my first paid job. I got the job first, and then got a haircut.") And because I was curious, what kind of music does he listen to now? (Arcade Fire, Sigur Ros and Nick Cave and the Bad Seeds are his

current favourite live bands.) One may have a stereotypical picture of a lecturer, but Dr. Hughes is, dare I say...hipster?

What I took from all this new information was that although Dr. Hughes's knowledge and dedication has clearly been apart of his success, his personality and flair has made him a distinct figure within the medical school.

Dr. Hughes told us that one of the favourite parts of his job was welcoming first years and being able to make that first impression of the medical school. It is my personal opinion that he does a very good job. Since that first day when I saw cadavers, I never did quite forget that conversation. It was the first validation and encouragement I'd received since arriving that I was, in fact, in the right place. I cannot speak for everyone else, but at least for me, it definitely set the tone for the next wonderful and brief 3 years.

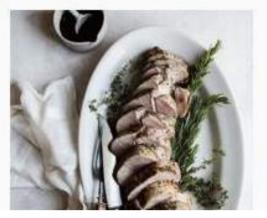


Dr. Alun Hughes received his undergraduate degree in Pharmacology at the University of Aberdeen. Dr. Hughes's dissertation investigated the role of aspirin in reducing the risk of colorectal cancer. Dr. Hughes then completed a PhD in Pharmacology and Toxicology from the same university, and stayed on for many years as a postdoctoral researcher. Finally, in 2011 Dr. Hughes accepted a post as a lecturer at the University of St. Andrews, where he now serves as the Director of Teaching.













## THE RISE OF THE 'INSTADOCTOR'

Antonia looks at the important role Instagram and other social media sites play in the promotion of healthy lifestyles.

#### **By Antonia Dick**

Social media...a mish-mash of misinformation, false advertising, and unattainable health and fitness 'goals.' However, with the emergence of doctors, and other health-and-fitness professionals leading the way for evidence-based research on these platforms, social media lends itself to become entirely something else.

Yes, believe it or not, some doctors, scientists, and health-and-fitness experts are ditching journals, seminars and other avenues, where average members of the public are unlikely to stray, and posting their research on healthy-lifestyle straight to Instagram...and into the phones and homes of the general public. And why not? With the rising prevalence of diabetes and obesity (particularly in childhood), and social media usage at its peak (especially amongst younger generations), using this platform to combat health issues could be the smartest public health move we have at our disposal. With the average person having more access to information, inspiration, and

guidance than ever before, could social media inspire a new generation of health-savvy individuals, and paint a brighter picture for the future health of the nation?

So, what will you find on the average Instagram page of these doctors/social media influencers? Contents range from healthy recipes and workout ideas to original research and public health campaigns. Many fitness professionals also offer fitness and diet plans, and explain the in-depth science and anatomy behind different workouts and exercises. The promotion of health and fitness online by professionals has become so popular, many even have recipe

books, magazine columns, slots on television programmes, and appear at events and health festivals in a sort of 'celebrity appearance' manner.

With a wealth of information at people's fingertips, these doctors are providing simple and useful information in an accessible, easily-digestible manner. Studies have highlighted the potential for social media to increase engagement with health promotion, particularly in groups who would benefit most from it, and who historically have not engaged with public health measures. An article on the use of social media in health promotion (Neiger et al, 2012) details how incorporating social media into health promotion could be the most successful way of involving minority groups and adolescents. These ideas, combined with the fact that those who use social media regularly are often inactive or have unhealthy habits, could make this approach exceptionally successful.

Of course, Instagram is not going to cure the world's health problems single-handedly, and, in fact, it does pose some problems of its own. With every real expert, there are thousands of non-experts claiming to be one, who flood the web with non-evidence based information and personal opinions that loyal

followers often believe. Because of this, online users must decide what information to trust, and what information to discard. In a study on how patients can be empowered by social media (Househ et al, 2014), this issue is alluded to: "little is known about patient review of such information and the decisions of social media users to either use or not use the information that is provided by other users". One of the other challenges is the commercial input to Instagram and social media as a whole. With the sponsorship deals and paid content on Instagram, many 'influencers' promote health brands and products they may not even use for themselves. While we can hope that health professionals would only promote information

with a strong evidence-base, there is potential for conflict between their role as a doctor, and their role as a content-creator, which heavily involves branding, and business interactions.

With a whole world of new possibilities for health promotion opened by social media and health professionals online, new challenges arise for patients and healthcare providers alike. However, the championing of evidence-based medicine on these platforms makes this accessible and understandable for everyone. We can hope that patients, and the general public will learn to separate the good information from the bad, and even start to conduct their own research.

thefoodmedic o

which would be a massive step in the right direction.

'Social media has a future in healthcare, especially with regard to patient engagement and empowerment; however, there are several challenges to overcome before the technology can achieve its potential' (Househ, 2014)

#### **References:**

Neiger, B., Thackeray, R., Van Wagenen, S., Hanson, C., West, J., Barnes, M. and Fagen, M. (2012). Use of Social Media in Health Promotion. *Health Promotion Practice*, 13(2), pp.159-164.

Househ, M., Borycki, E. and Kushniruk, A. (2014). Empowering patients through social media: The benefits and challenges. *Health Informatics Journal*, 20(1), pp.50-58.

Image from:

https://www.oberlo.com/blog/instagram-influencer-marketing

#### Three doctors you need to follow on Instagram-

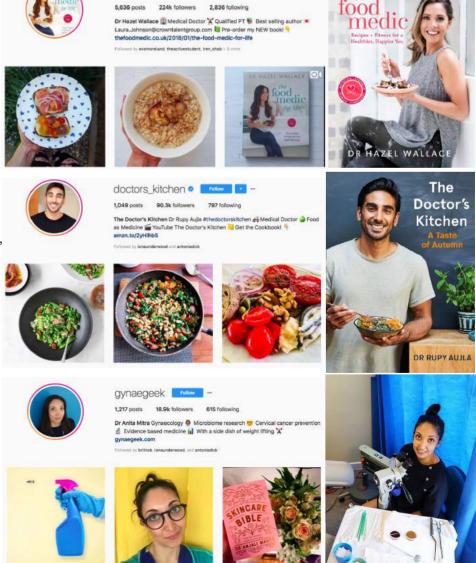
Dr. Hazel Wallace
(@thefoodmedic)-With one best
selling recipe book under her belt
and another on the way, this junior
doctor (and qualified PT) is leading
the way for health and wellness
online. Posts include workouts,
meal ideas, and health-myth busters
on the regular- all whilst making
these fun and relatable.

#### Dr. Rupy Aujla (@doctors\_kitchen)-

On The Doctor's Kitchen, you'll find amazing, healthy and delicious food! Dr. Aujla preaches 'food as medicine,' and posts videos, recipes, and plenty of pictures to inspire others to eat well.

#### Dr. Anita Mitra (@gynaegeek)-

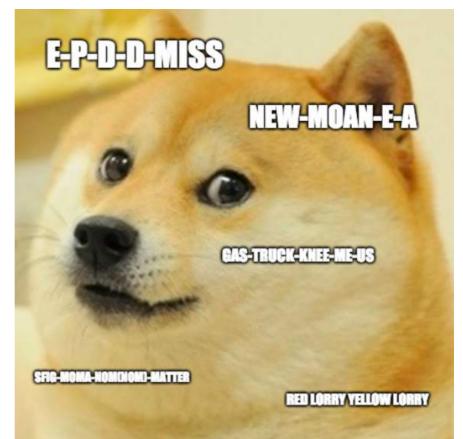
Gynaecologist, researcher, weightlifter, and superwoman, Dr. Mitra is an evidence-based medicine champion. She posts informative explanations on gynaecology and health multiple times a week. Dr. Mitra also lets followers into her busy life during shifts and research work, giving them an idea of what it takes to balance all her inspirational work.



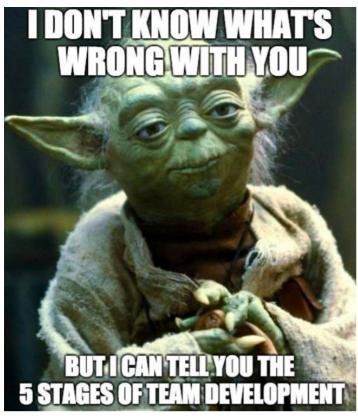
## MEDIC MEMES

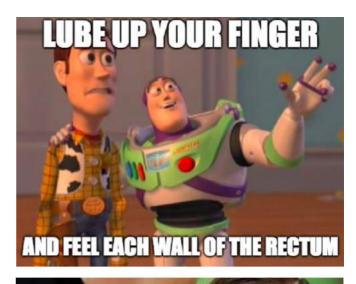
#### By Adrienne

When the woes of medical school cannot be captured in simple text, memes help save the day.



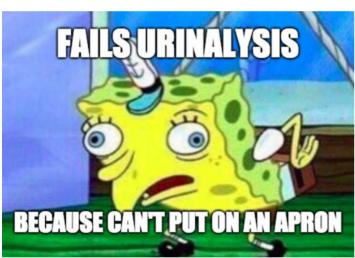
















WHEN YOUR UNDERCLASSMEN'S GOT YOU WITH A CALCULATOR RIGHT BEFORE YOUR MSA

Ascaris lumbricoides

Before and after seeing this lecture ->







WHEN YOU STRIP IN CLINICAL SKILLS
BECAUSE OF THOSE GODDAMN STAIRS



When you're a medical student on placement





## NOT REQUIRED READINGS

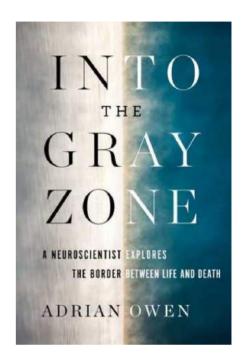
A review of medical books you don't have to read, but should

#### By Iren Shabanova

#### "Into the Gray Zone" by Adrian Cohen

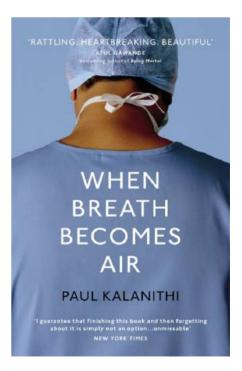
I've had this book lying around on my shelf for a while and only recently have I dusted it off and cracked it open. I was surprised at how quickly Cohen's simple language and fascinating research hooked me.

This book is written by a British neuroscientist Adrian Owen, who worked at the University of Cambridge and later, at the University of Western Ontario in Canada. His work centred on the topic of "gray zone science." The "gray zone" is the vegetative state that patients enter when they are unconscious but are not in a coma – they are able to breathe and open their eyes but they are unresponsive. Cohen's research started off when fMRI scanning was on the brink of development and he began scanning the brains of vegetative patients for signs of consciousness. In the book, he describes the many different tests the researchers had to use (and often improvise) to figure out what being conscious *actually* means and how we can ascertain it. His ground-breaking work produced a media frenzy and has completely changed the way doctors view the "gray zone". Simple and intriguing, I highly recommend this book to those interested in the workings of the brain or just looking for an educational read that's not a textbook.



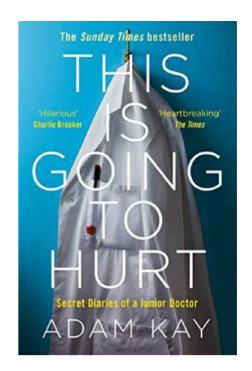
#### "When Breath Becomes Air" by Paul Kalanithi

This moving memoir follows the life of Paul Kalanithi and his transition from an ambitious, but naïve medical student driven by what constitutes a meaningful life, into a neurosurgical trainee at Stanford, and finally, into a patient confronting his own mortality. He discusses the emotionally and psychologically gruelling aspects of working in neurosurgery, and his personal struggle to overcome them. The book is divided into two parts: one before, and one after Kalanithi's life-changing diagnosis of stage IV lung cancer. In his emotional story, Kalanithi reflects on the doctor-patient experience first-hand, as he is mercilessly transformed from the former into the latter. As his brilliant career path is brought to a sudden dead-end, Kalanithi returns to the question that has troubled him since childhood: "what makes life meaningful?"



#### "This is Going to Hurt - Secret Diaries of a Junior Doctor" by Adam Kay

After six years of working as a doctor on the NHS and a life-changing incident on the job, Kay decides to "hang up his stethoscope" and completely change gears to become a comedy writer. Kay's stories reflect the title of the book in their painful horror and hilarity. In this collection of entries from his journals, Kay masterfully paints scenarios of his encounters with patients on the wards, going into detail on the many, many, many tasks required of junior doctors on the NHS. His writing style captures your attention in the first few pages and his anecdotes are always witty and captivating. Whether he makes you laugh or cry, Kay is bound to give future doctors a glimpse into the frequently ugly reality of "real-life" medicine.

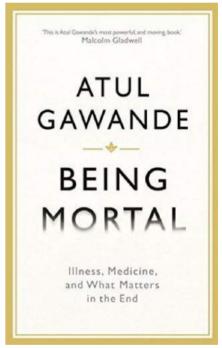


#### "Being Mortal" by Atul Gawande

In this profound and philosophical work, Gawande discusses many essential questions of the medical profession, namely, what comprises the fundamental philosophy of healthcare: is it ensuring health and survival, enabling "well-being," or simply delaying death? Gawande opens up the taboo topic of death, reminding us of its ultimate inevitability, its implications in healthcare, and our responsibility, as health professionals, to be able to deal with it. Though the subject of death may not seem like your typical Sunday-night read, the sooner we feel comfortable enough to face this topic, think about it, and discuss it, the more we will be able to adequately support our patients in the future.

#### **References:**

https://goo.gl/images/vk3Xh6 https://goo.gl/images/qotPq7 https://goo.gl/images/G8YM6T https://goo.gl/images/sh7bBu







## MEET THE MED DEMS

#### By Chelsea Chan

At the beginning of each academic year, one of the things that I look forward to the most is meeting the new medical demonstrators. Each group of medical demonstrators gives a distinct flavour to the year's teaching, and each medical demonstrator brings a piece of their personality into their teaching.

They seem superhuman; they tirelessly lead tutorials, teach clinical skills, guide dissections, and on top of that, they probably have their own lives too. I am stunned to consider that they are only six to eight years further down the path, yet their knowledge is so extensive. To me, comparing levels of knowledge is like comparing a tropical rain forest to the Mongolian steppes.

However, as always in the short

lifetime of medical school in St. Andrews, it seems that just as I start getting to know the medical demonstrators, the year draws to a close. It's a bittersweet theme of university – just as they've begun to remember my name, and just when I've figured out their hobbies and which medical demonstrator can be found in Tesco at sunset, it is time to part ways. Time is always short to get to know them and find out what they're up to next. Time literally runs out every time I try to ask about

them between stations at my year-end OSCE exam (though it is highly recommended as a conversation changer after a particularly awkward OSCE performance). With this in mind, I sent a brief questionnaire to each of the medical demonstrators. The collection of answers is largely unaltered, as you will, to showcase the *flavours* with which they wrote them.

#### **DR. EILISH HANNAH**



-Where have you done your training so far?

I trained in St Andrews then Manchester and did my foundation in the south Thames deanery. For the next three years I will be doing GP training in Edinburgh, hopefully with a special interest in global health and expedition medicine. This has developed from time spent travelling, particularly in Malawi and Peru. I like general practice because the

illnesses and patient cohort are the most varied out of all the specialties, and you also have the chance to really get to know your patients.

-Why general practice?

The variety of patients and pathology, the chance to sub specialize; there is the option to do lots of practical skills with this job as well, have a good work life balance and do some humanitarian/expedition work. A great chance to get to know patients.

-What place do you call home? Edinburgh and York.

-Was there a life experience that contributed to steering you towards where you are today?

Travelling and in particular, my time in Malawi and Peru.

-Any memorable or embarrassing OSCE moments?

All those memories are repressed.

-What extracurriculars or hobbies do vou eniov?

Running, hiking, learning Spanish

-What place do you call home?

South Wales (not my actual home

most – I'm actually from Bolton).

-Was there a life experience that

contributed to steering you towards

where you are today?

I loved Grey's Anatomy when I was

obstetrician and foetal surgeon) so I

went to medical school so I could be

wasn't for me and now I'm looking

forward to a life of looking up bum

-Do you have any

favourite/funny/embarrassing

student experiences?

favourite med dem was a personal

Any memorable or embarrassing

OSCE moments?

More than one student shooting the

tympanic probes into the stimulated

patients' ears while trying to take a

temperature was more concerning

at school and really wanted to be

Adison Montgomery (who is an

her, eventually discovered that it

holes instead of vaginas.

Being told I was someone's

highlight.:)

which is apparently a surprise to

generally being awesome.

*-What is your most useless talent?* (or any talent)

I can say thank you in 14 languages. I have a talent for losing my keys.

-If you could choose a different career, what would you have chosen?

Vet or work in conservation.



than anything else. Top tip, if you haven't already done so, go and learn how to use the new thermometers.

do you enjoy?

Skiing hurt my knee :(. I love skiing

-What is your most useless talent?

I have a remarkable ability to knock people's drinks over, and they are

-If you could choose a different career, what would you have

I would own my own wedding dress



-What extracurriculars or hobbies

but it doesn't love me.

(Or any talent)

always alcoholic drinks...

chosen?

shop and stare at them all day. :)

#### DR. HARRIET COXON

-Where have you done your training so far?

Undergraduate at Cardiff University, and my foundation training in the wonderful health board of Abertawe Bro Morgannwg.

-What is your desired specialty or career?

General Surgery – colorectal, ideally with a role in medical education.

-What drew you to this specialty?

I find the bowel really interesting and very, very beautiful; it just makes sense to me. Why surgery over gastroenterology? I like that in surgery when a patient comes in with a problem, the majority of the time you can fix it, not treat it with medication and wait for something to happen. You can see the body and repair or remove it.

-What are your plans for after St. Andrews?

I have a run through training number in general surgery waiting for me in South Wales come August.

-Where do you see yourself in five years?

General surgical registrar tottering around in beautiful heels and

#### DR. IMOGEN MURRAY

-Where have you done your training so far?

I did my Foundation training in Edinburgh, Fife and Tayside. I've also done a year of O+G working in Fife.

-What is your desired specialty or career?

Obstetrics and Gynecology

-What drew you to this specialty?

I hadn't really considered O+G until I did a rotation in it during foundation training. I loved the mix of medicine/ surgery. The tea trolley on the labour ward also influenced me! (so many nice cakes)



-What are you plans for after St. Andrews?

I'm staying at the medical school for another year. Then hopefully back to O+G.

-Where do you see yourself in five years?

With a fully finished house (I'm currently in the midst of renovations).

-What place do you call home?

I'm originally from
Northumberland, but have lived in
Scotland ten years, and five years in
rural Fife. Home is now an old
cottage on a nature reserve, where I
live with my husband, horse

(Ebony), daschund (Percy), cat (Jago) and three chickens.

-Any memorable or embarrassing OSCE moments?

In my 4th year OSCE when asked how I would treat a patient with testicular torsion as first line, I confidently informed the simulated patient and examiner we would have to perform an orchiectomy (removal of testicle). Even when the patient and examiner were giggling and I was asked if I would like to change my answer I didn't get the hint. Only when I left the room did I realize that it was probably quite a radical first choice of treatment...

-What extracurriculars or hobbies do you enjoy?

I enjoy singing/ drama and can sometimes be seen in various musical productions around Fife. I also have a horse and enjoy hacking around the Fife countryside.

-What is your most useless talent? (Or any talent)

I seem to be able to guess accurately (like to the nearest 10p) the cost of any basket/trolley of shopping. A truly useless talent.

-If you could choose a different career, what would you have chosen?

Flower farmer!

#### DR. LIBBY DAI



-Where have you done your training so far?

I trained at the University of Otago in New Zealand, with my pre-clinical years in Dunedin, my clinical years and honours year in Wellington, and my final year in Palmerston North (AKA City of Dreams). And I've practiced for four years in provincial New Zealand, jumping around between general medicine, general surgery, cardiology, paediatrics and emergency medicine (and dabbling in veterinary medicine when someone fed my pet sheep, George, some cigarettes at a party that got out of hand).

-What is your desired specialty or career?

I change my mind on a daily basis. Currently vacillating between general medicine, rural general practice, paediatrics, and dropping out of medicine, buying a food truck, and road-tripping around the world selling tacos or dumplings.

-What drew you to it?

I tend to love whatever I'm doing at the time! I want to be a generalist, whatever I end up doing, because I love the variety and challenge of having to manage a range of conditions and of thinking about the whole person rather than a system in isolation.

-What are your plans for after St.
Andrews?

I expect to be deported shortly after my job finishes here, and will probably wander back home to New Zealand, possibly via various other countries along the way. No firm plans!

-Where do you see yourself in five years?

I only wish I knew. See potential food truck plan above.

-Any memorable or embarrassing OSCE moments?

In an OSCE in my first year of med school, I blurted out that the patient had no bowel sounds. Turns out my stethoscope was turned to bell rather than diaphragm. The examiner was very amused.

-What is your most useless talent? (Or any talent)

I don't know that it is a particularly useless talent, but I did learn to do a lumbar puncture before I learned to drive a car. (I'm still pretty rubbish at driving.)

#### **DR. LINDA PROVAN**



-Where have you done your training so far?

So far I have completed foundation training in Edinburgh and the Borders in a variety of medical and surgical specialties. Edinburgh is a beautiful, diverse place to live and work!

-What is your desired specialty or career? What drew you to it?

I spent all of medical school preparing for a career in surgery. Then in my FY2 year did a lot of medicine and critical care and found this far more challenging (in a good way) and rewarding than any of my surgical rotations! I enjoy the detective work of acute medicine and love getting to know my patients, so I'm planning to pursue a

career in acute medicine.

-What are your plans for after St. Andrews?

It's all a bit up in the air just now. I was offered a training post in Glasgow but turned it down as it wasn't what I wanted. I figured it is worth taking a risk and trying again next year for what I really want – if it doesn't work out then at least I tried. In the meantime I'll be trying to get some more acute medicine experience and trying to earn some money so I don't starve.

-Where do you see yourself in five years?

In 5 years' time I hope to be a specialty registrar of some sort, still doing some teaching and being a farmer in my spare time!

-What place do you call home?Glasgow is home.

-Was there a life experience that contributed to steering you towards where you are today, or one that molded you?

I've been told that it's a bit of an X factor sob story, but basically I got appendicitis when I was 15 – no big deal right? Unless you don't go to your GP for 9 days like I did. The time I had waited led to my bowel perforating and become necrotic –

this meant I had lots of complications and needed a few surgeries including a laparotomy. All in all it was a challenging time – I was also trying to sit my Highers at school! Thankfully I did well and was inspired by the surgeons who saved my life. I applied to medical school and the rest is history!

-Do you have any favourite/funny/embarrassing student experiences?

I can't really think of any embarrassing experiences but I used to wear a lot of vintage granny cardigans that I thought were cool and hipster and now I realise I just looked like a crazy person.

-What extracurriculars or hobbies do you enjoy?

Baking, shopping, drinking coffee, Instagram.

-What is your most useless talent? (Or any talent)

I am current undefeated champion of the cereal box game amongst my friends.

-If you could choose a different career, what would you have chosen?

I think I'd like to run my own business like a little coffee shop or something.

#### DR. ROBERT MORETON

-Where have you done your training so far?

I studied medicine in Edinburgh and did my Foundation Programme training in Edinburgh and the Borders before coming up to St Andrews.

-What is your desired specialty or career?

I am due to start training in the Ophthalmology department in Edinburgh from August onwards.

-What drew you to it?

I worked in a diabetic eye clinic in east London prior to studying

medicine and so already had some interesting experiences of working with patients at risk of visual impairment. I really enjoyed doing projects in Ophthalmology at medical school and was interested by the medical and surgical aspects of the specialty during my elective at Moorfields Eye hospital in London.

-What extracurriculars or hobbies do you enjoy?

I love listening to all sorts of music ... blues, jazz, country and rock and roll. I enjoy running, cycling and playing golf. I really like cooking Italian food and have recently



developed a passion for growing vegetables.

#### **DR. WOJCIECH CYMES**



-Where have you done your training so far?

Studied at Cambridge for 6 years, followed by Foundation Training in Edinburgh.

-What is your desired specialty or career?

Early retirement, in the meantime exploring paediatric surgery.

-What drew you to it?

Practical aspect of operating (living anatomy!), working with children and their parents.

-What are your plans for after St.
Andrews?

Move even further north to Aberdeen and develop vitamin D deficiency during my Core Surgical Training.

-Where do you see yourself in five years?

Given my current trajectory probably at the North Pole, continuing my training there.

-What place do you call home?

That's a surprisingly difficult question to answer.

-Was there a life experience that contributed to steering you towards where you are today, or one that molded you?

I don't have enough insight to know.

-Do you have any favourite/funny/embarrassing student experiences?

None. My classmates laughed at me all the time, but I never understood why.

-Any memorable or embarrassing OSCE moments?

Saying that I would continue taking a cervical swab for 30 minutes in a gynae station.

-What extracurriculars or hobbies do you enjoy?

Dancing tango, learning foreign languages (Spanish and Arabic at present), collecting coins – just the typical. Also counting how many students avoid eye contact with me at Tesco.

-What is your most useless talent? (Or any talent)

The other meddems claim that breaking my elbow when playing charades is quite exceptional. Also, contrary to the popular opinion, I'm very good at riding a bike.

-If you could choose a different career, what would you have chosen?

Professional athlete, obviously.













### MEET THE COMMITTEE



**Jodi Chiu** - President

3 fun facts about me:

- 1. I don't have a problem with putting ketchup on almost anything I eat... it just makes the food taste better
- 2. I have a rubber duck collection. I find ducks absolutely adorable
- 3. When I was younger, my dad was forced to cut my hair in my sleep because I was terrified of scissors. My bangs were crooked for the first 5 years of my life

#### **Adrienne Tang** - Vice-President

I was born in Taipei, raised in Vancouver, and currently study in St. Andrews. Where do I call home? I haven't decided yet. I want to visit as many cities, make as many new experiences, and welcome as many people in my life while the opportunity exists. Medicine is immensely grounding, but there's so much more to seize.





**Chelsea Chan** - Editor

- 1. I have no talent for anatomy, but if you want to be regaled about Chopin's childhood, *I am your woman*.
- 2. Apparently, Canadian accents exist and I have one.
- 3. During my Skype interview to get here, my Microsoft laptop began updating. Finished the interview Asian-squatting with a tablet between my knees, treating Alan Stewart to a view of my double chin.

#### **Sammir Bushara** - Treasurer

Hey. I'm Sammir, and I'm the treasurer of the committee. I am a second year medic, and can be easily found staring blankly at a laptop screen in the library. Other occasional hobbies include walking, blowing moodily on a harmonica and the odd bit of writing (handy, that!).





**Puroshini Pather** - Publisher

 $(\odot\omega\odot)$  Well hello there! I am one of your gracious hosts, Puroshini. I enjoy salad, marathons and yoga.

JuST KiDdiNG I put nutella in my hot chocolate and watch Youtube videos. Like that video where they make miniature pancakes in a tiny oven with a tiny spatula for their pet hedgehog. Man that was a good one, you should watch it.



#### Antonia Dick - Publisher

2017/18

I'm Antonia, a second year medic from Glasgow. In my spare time I like to play guitar, go the beach and the gym and I'm also learning to surf. I'm a big dog lover and I also read a lot. I hope to write more articles about health and fitness in medicine in future editions of Medsaint. So far, I think I'd like to be a GP when I finish medical school!

#### Iren Shabanova - Publicity Representative

Hey everyone, my name is Iren and I love to travel the world, try new things, cuddle dogs and laugh at everything (but mostly memes). Some of the things I haven't yet tried but really want to include: skydiving, learning to scuba dive, going to New Zealand, and travelling all over Asia.





