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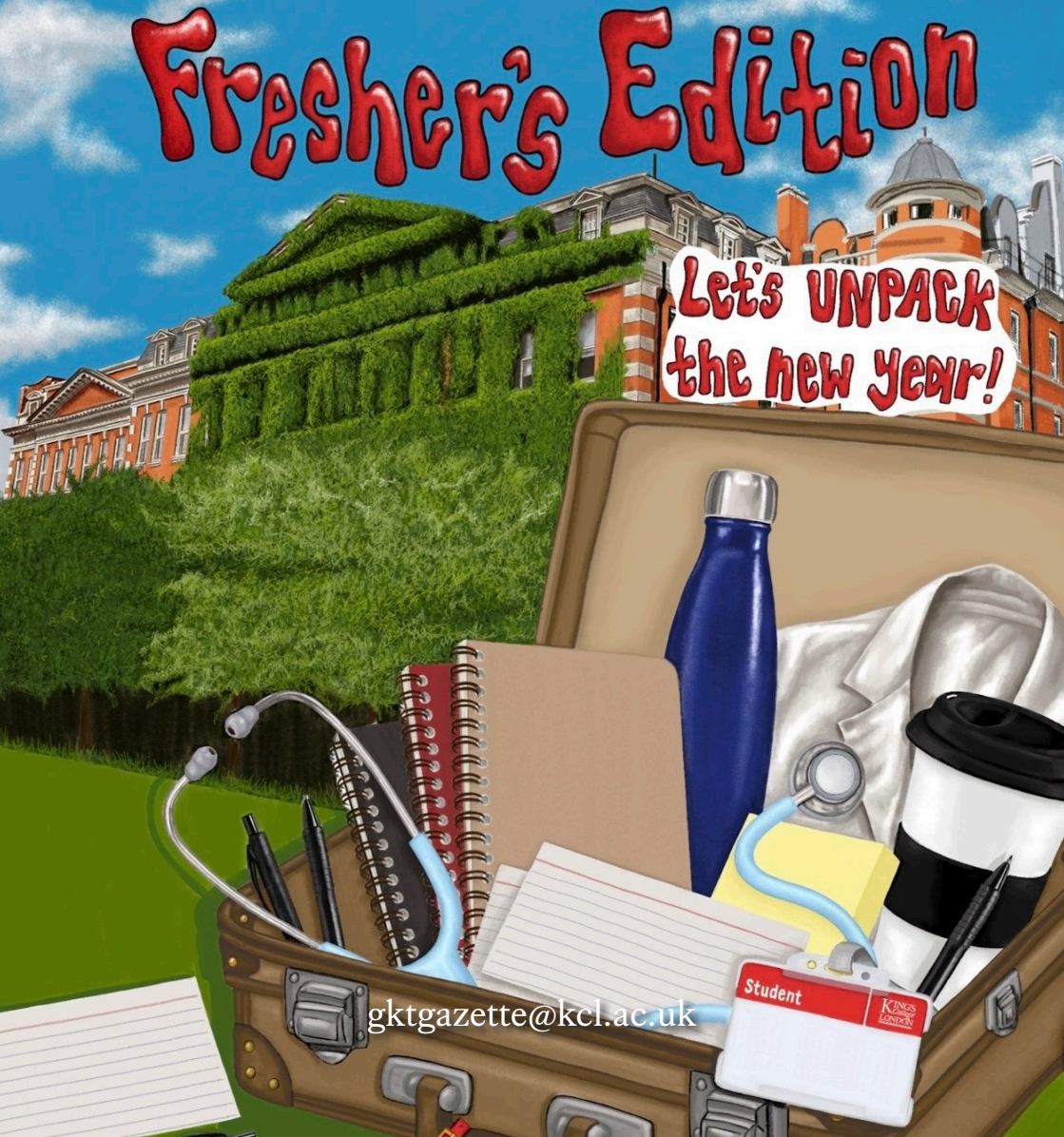
GKT Gazette

Fresher's Edition



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Contents

Passim: Fresher's Edition

Editor - Morgan Bailey **MBBS4**

Dear Readers,

Welcome to the third issue of Volume 134 of the Guy's, King's College and St Thomas' Hospitals Gazette. This issue is packed full of contributions from every corner of the hospitals, medical school and beyond.

To the freshers, welcome to the finest medical school and hospitals in the World. I trust you will find your home for the next few years and take pride and comfort that we are home to the World's oldest student hospital journal. It is a testament to the heterogeneity of talents of those representing our famous three crests that we can continue producing stellar Gazette editions. Take your education seriously but remember to have fun. For some of you, that will include contributing to the Gazette. Get in contact with us on Instagram or email if you are interested in seeing your work upon this pages. To find out more about the Gazette, visit our website.

Myself having returned from intercalating in history and philosophy of medicine at UCL, I cannot help feeling a bit rusty. The common phrased uttered as reassurance, that *"it will all come back"*, continues to feel like a lie told to appease little children. And I am not appeased.

Joking aside, those in their earlier years may take comfort in knowing that you do not need to know everything. Medicine in particular is a marathon not a sprint, and medical school acts as the foundation for a life-long educational journey. For those thinking of intercalating or returning from intercalation, you may take comfort to know you are not alone if you share similar anxieties.

And despite the undeniably tumultuous period in medicine and the country as a whole, we at the Gazette continue on. I hope that this Gazette offers something for everyone and I look forward to welcoming your letters and contributions in the upcoming year.

Last but not least, as I approach my twilight years of medical school, I am reminded that the Gazette must continue without me. Over these next two years I will be on the hunt for an editor (or editors) in-chief to step up to the helm in my place. It is an incredibly rewarding role that has been my highlight of medical school. If you think you have what it takes, come and introduce yourself at our events throughout the year and if you have any further questions, please email gktgazette@kcl.ac.uk or DM us on Instagram (@thegktgazette).

Dare Quam Accipere.

Yours,

The Editor

We welcome submissions from anybody affiliated with GKT to be published in subsequent issues (email us at gktgazette@kcl.ac.uk).

If you are a student and would like to join the Editorial Committee to be involved in crafting future editions, keep an eye out on our Instagram (@thegktgazette) regarding our recruitment rounds.

Deputies' Digest

Deputy Editors - Noor Amir Khan **MBBS4** and Naim Ghantous **MBBS3**

Dear Readers,

As I watched the first torrential downpours hit the thirsty London streets from New Hunt's House, the dulling yet inevitable thought permeated my mind – summer is truly over. How did we get here? Another winter season away from summer nights abroad and sunsets at Primrose Hill. With summer ending, as always, change lingers in the air. This issue of the Gazette therefore arrives at a pivotal time, the volta of the poem you have written for yourself so far this year if you will. As always, in these pages you will find moments of challenge, comfort, wisdom and community, spearheaded by our phalanx of editors, writers and designers.

First, the editorial team at the GKT Gazette would like to extend the warmest of welcomes to the freshers soon to flood Guy's campus. Your resolve and unquestionable brilliance have brought you to one of the most gifted and compassionate student communities in the country, and you all deserve to be here. We often cast our minds back to that daunting yet exhilarating period, the nascence of a new life made up of raw connection, blind courage, and formidable knowledge. We frequently find that the decisions we made all that time ago blossomed into the cornerstones of our current lives, unknowingly planting the seeds of our growth.

It is for this reason that we would like to impart a message to you, dear reader. Whether these are your infant steps onto campus or you've lived there rent-free for years, go and sink your teeth into anything and everything life offers you. Join that sport, try that society out, meet new people, express yourself unapologetically and try to find out, to the best of your ability, who you are and what *you* want.

For the freshers especially, life until this point has likely felt encapsulated within the confines of youth, but very soon you will be presented with an incredible amount of foreign yet invaluable opportunities to learn more about yourself. Take them. You will make mistakes, goodness knows I have, alongside the infinitely talented writers and designers that have brought this issue to life, but you will thank yourself for it very soon.

As always, we would like to thank the wonderful team here at the Gazette for their unwavering diligence and compassion, and for making sure that GKT voices are heard.

Please do not hesitate to contact us if you would like to contribute to the journal, or whether you have any ideas or questions.

We hope you enjoy this issue!

Yours Sincerely,
Noor Amir Khan and Naim Ghantous
Deputy Editors in Chief

If you would like to contact the editor, please email gktgazette@kcl.ac.uk

Letters to the Gazette

Want to contact the Editor? Have a short-form reply to any of the articles in this issue? Want your opinion heard? Get in touch to contribute to our letters section.

Photo: Guy's Gazette Volume 110 No 2466 - July 1997

Features

The Colonnade Guy's Hospital

Covers and Photos

All photos are taken by our editorial committee or royalty free stock images unless otherwise stated.

Our cover is a fantastic illustration by Devon Kaye MBBS1. It depicts a suitcase being opened on the first day of medical school.

Our back cover is a similarly fantastic illustration by Zainab Adbur Rahman MBBS3. It depicts a corkboard of a GKT student.

The NHS Explained: Britain's Greatest Treasure, Under National Pressure

Milad Qadare **MBBS3**

The National Health Service (NHS) is one of the most recognised institutions being the UK's largest employer, with around 1.3 million staff. Founded in 1948, it promised healthcare that was free at the point of use, accessible to all, and funded by taxation. Today, as headlines focus on strikes, record waiting lists, and questions over its sustainability, understanding what the NHS is and how it works is more crucial than ever.

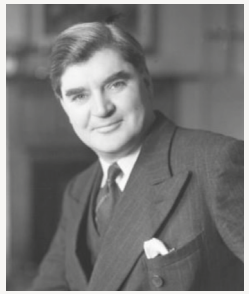
As medical students, we may forget that our careers start here, and many of us may not fully understand the system we are about to enter. This article gives a clear overview of what the NHS is, how it functions, and why it remains central to the UK.

Origins and History

Before the NHS, access to healthcare in Britain was fragmented. Many relied on charities, friendly societies, or out-of-pocket payments. Illness could mean financial ruin, and poorer families often went without treatment altogether.

In 1948, Aneurin Bevan, the Minister of Health in the post-war Labour government, launched the NHS as part of a wider wave of welfare reforms. Its founding principles were clear:

- **Comprehensiveness** – meeting the needs of everyone
- **Universality** – free at the point of delivery for all
- **Equity** – based on clinical need, not the ability to pay



Aneurin Bevan (1943)

Hospitals were nationalised, general practice restructured, and a new publicly funded system created - the NHS as we know it today. Over the decades, milestones have included the first organ transplants, CT scanning, mass immunisation programmes, and the creation of the National Institute for Health and Care Excellence (NICE). Later reforms, including the 2012 Health and Social Care Act, reshaped the system further, expanding the role of local commissioning and private providers.

How the NHS is funded

The NHS is primarily funded through **general taxation**, with a smaller share from **National Insurance contributions**. This collective approach means healthcare is financed according to the ability to pay, rather than individual insurance or out-of-pocket fees.

In 2024–25, NHS England's budget is **£179 billion**, making it the largest publicly funded healthcare system in the world. This reflects the immense demand: every year, the NHS delivers tens of millions of consultations, billions of prescriptions, and record numbers of treatments.

Some highlights from 2024:

- **30.7 million** GP appointments, including **244,000 Covid-19 vaccinations**
- **1.26 billion prescriptions** dispensed, costing around **£11.2 billion**
- **18 million elective treatments** performed — a record high

These numbers underline not only the scale of the NHS, but also the constant financial and logistical pressures that come with maintaining a universal service.

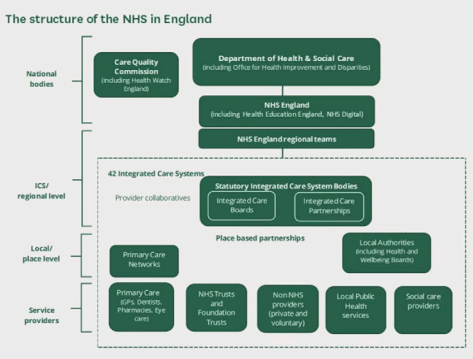
Structure and Who Runs It

The NHS can be understood in three layers: national, regional, and local. At the top, responsibility lies with the Department of Health and Social Care (DHSC), which sets policy and funding. Day-to-day management is delegated to NHS England, which allocates the budget and sets priorities.

Below this national level, services are organised regionally through Integrated Care Boards (ICBs). These bodies bring together hospitals, GPs, community services, and local authorities to plan healthcare for their area. The idea is to reduce fragmentation and make care more joined up between hospitals, GPs, and social care.

At the frontline are the NHS Trusts, which run hospitals and specialist services, and Primary Care Networks, which cover local GPs, dentists, pharmacies, and opticians. These are the services most patients interact with directly.

It's worth noting that the devolved nations, Scotland, Wales, and Northern Ireland, each manage their own NHS systems separately, with their own structures and priorities.



The structure of NHS

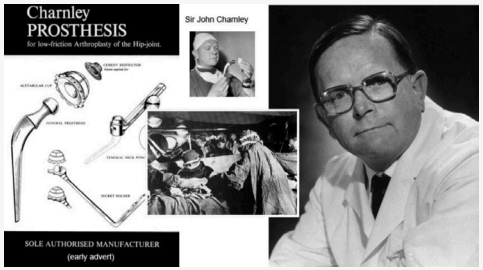
Uniqueness and Achievements

The NHS is unusual globally. Many healthcare systems, like that in the United States, rely on private insurance, co-payments, or mixed publicprivate funding. By contrast, the NHS is almost entirely funded through taxation, making it both universal and free at the point of use.

In the U.S., healthcare often depends on employment-based insurance or high out-of-pocket costs for those without coverage. This can limit access and create financial barriers to care. The NHS's model of equity sets it apart from such market-driven systems.

The NHS has also been a pioneer in medical innovation and public health. Some of its most significant achievements include:

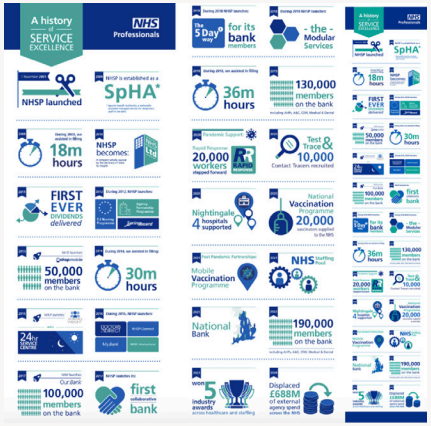
- **The first full hip replacement**: Performed in 1962 by Sir John Charnley at Wrightington Hospital, this revolutionised orthopaedic surgery and transformed quality of life for countless patients.



Sir John Charnley – Charnley Prosthesis

- **The first bone marrow transplant in a child:** Performed in 1973 by Professor John R. Hobbs at Westminster Children's Hospital, this included the world's first transplant using a matched unrelated donor - a breakthrough for childhood cancers and immune disorders.

Researchers at **King's College London's Faculty of Social Science & Public Policy** also advised the UK government during the COVID-19 pandemic, shaping NHS strategies on emergency preparedness, testing, and wider public health interventions.



A list of historical NHS achievements as of 2024

Costs and Challenges

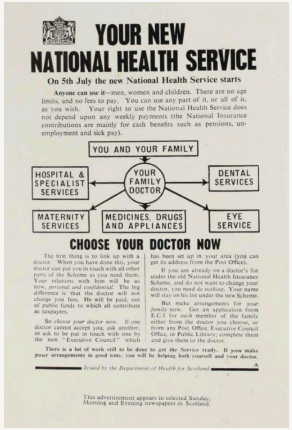
Running a universal health service comes with significant challenges. An ageing population and the rise of chronic disease place constant pressure on services. Demand frequently outstrips resources, and over 7 million people are now on waiting lists in England - the highest in NHS history.

Staff shortages, low morale, and industrial action highlight the strain on the workforce, while financial constraints leave many services underfunded. Bureaucracy and variations between regions, sometimes referred to as the 'postcode lottery', also affect patients' experiences.

Impact on the UK

The NHS has reshaped British society. By removing the financial barrier to care, it dramatically improved equity and public health. It is consistently regarded as one of the most trusted national institutions, and its values have become woven into the fabric of national identity.

However, its challenges cannot be ignored. Underfunding, long waits, and high demand risk undermining its founding principles. For staff, the pressures of training, workload, and pay disputes have become a defining feature of working life in medicine.



National Health Service leaflet (1948)

Current State

Today, the NHS is under intense pressure. Over 7 million people are on waiting lists in England alone. Junior doctors and consultants have staged industrial action, highlighting issues of pay and retention. Emergency departments regularly report being at breaking point - but public support for the NHS remains unwavering. Surveys consistently show that the majority of the population values the NHS and wants it to remain publicly funded and free at the point of use. Political debate continues over how to fund it sustainably and what role private providers should play.

Junior Doctors striking in London in March 2023

Why the NHS matters

The NHS was built on the belief that healthcare is a right, not a privilege. It embodies a collective promise: that illness should not depend on wealth, and that society benefits when everyone has equal access to care.

While the challenges facing the NHS are real, its importance is clear. It has shaped the health and identity of the UK for more than 75 years. Its future depends on how today's challenges are addressed, but its founding principle - universal care, free at the point of use - remains as vital now as it did in 1948.

References available on request at gktgazette@kcl.ac.uk

FEATURES

I hated AI study apps. So I built one I could trust: qVault.ai

Issac Ng **Intercalating**

A tool born from scepticism, built for survival, with quality in mind.

It was 1am in the library, my third cup of coffee in (back then there was still a Pret subscription), and my Anki stats looked glorious. Two thousand cards reviewed, none in red. My graph was perfect. My brain wasn't.

The next morning on the ward, I froze when asked to explain a murmur I'd "answered" ten times the night before. Turns out I'd trained myself to avoid "leeches" in an app, not in a patient. That's when it hit me: the green tick is a lie.

Like most of us, I started with pre-made decks. And to be fair, many are built with good intentions. But they're rarely vetted, rarely scaffolded, and mapped to the official UKMLA curriculum. They presume you already know what's happening before you've learnt it (who exactly is that for?) The result is the flashcard rabbit hole: endless cloze deletions. They're quick to make, quick to click, and give the illusion of progress. But these cards are not active recall, more like Mad Libs for medical facts.

The other side is even worse: the so-called "revolutionary" AI tools. Web apps that are little more than ChatGPT in a lab coat. No Bloom's taxonomy. Card weight that fluctuates. No scaffolding or understanding. Just trivia at scale, optimised for subscription buttons. They promise "efficient studying" but deliver noise.

I'll admit, I hate most AI-in-education tools. Which is why it's slightly ironic that I ended up building one. Not because I wanted to cash in — I don't (between year 3 rotations, research projects, Cambridge applications, and the occasional side gig helping run companies, the last thing I needed was another job.) But together with Dr. Mandeep Gill Sagoo and a dedicated, passionate student team, we started qVault out of frustration; with grants and institutional backing, not VC hype. Because if you're going to survive medicine, you don't need quicker shortcuts. You need something that actually works.

Flashcards are just one piece of what we're building, but they've become the clearest test of whether an AI tool respects students. Ours export straight into Anki; no lock-in, no friction. They're mapped to UKMLA outcomes, scaffolded so concepts grow from recall to reasoning, and written in the same voice as your notes. We can't yet do image occlusion, but we transcribe images into usable text prompts, so diagrams don't fall through the cracks. The interface is still a work in progress (occasionally clunky), but the point was never to be shiny, but functional.

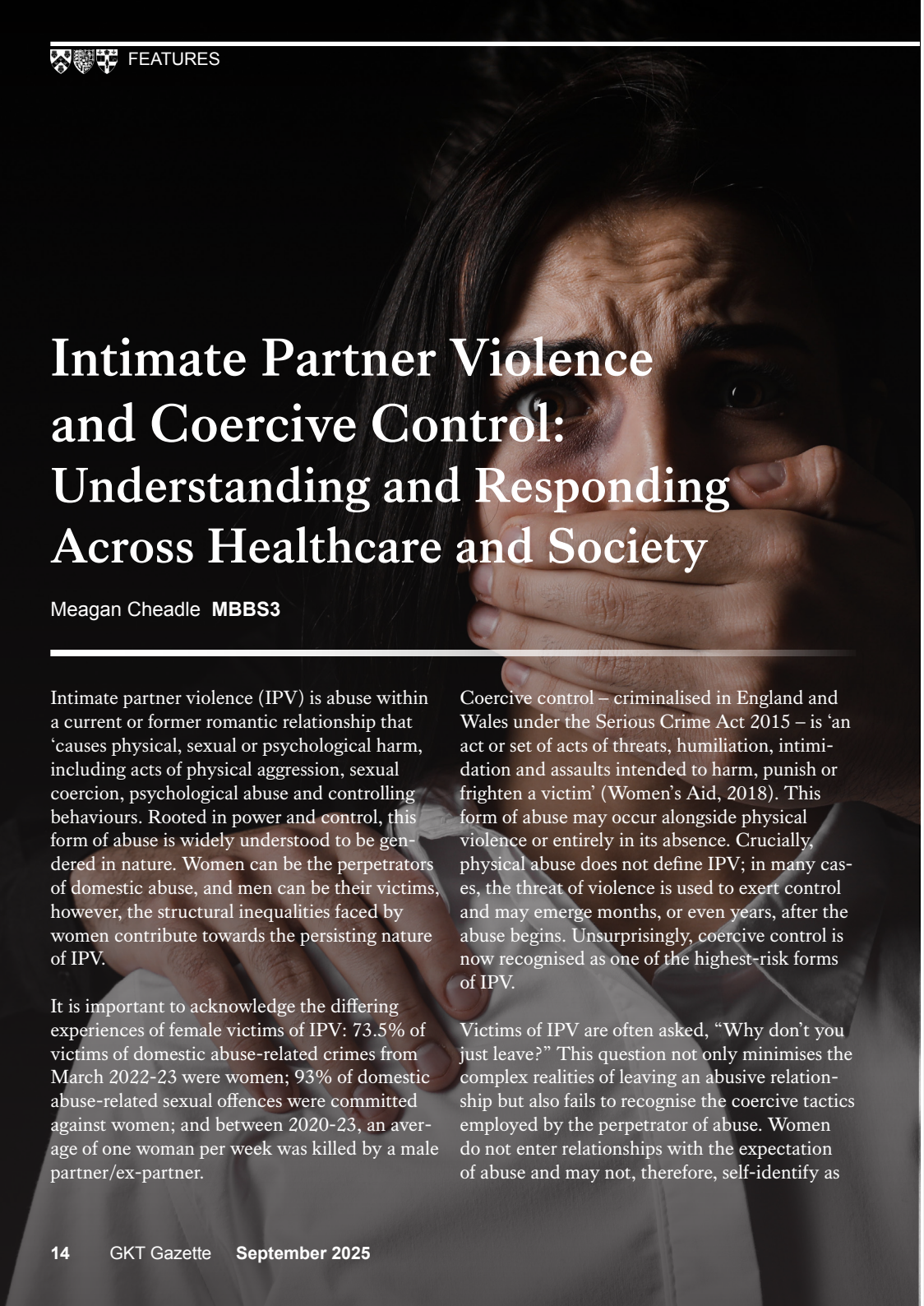
And that principle, "substance before gloss", is what has set qVault apart. When we launched the pilot at King's, more than half of first years signed up in the first week. Not because we shouted the loudest, but because students recognised something different: cards and SBAs that were actually mapped, trusted, and usable. The same story repeated in our feedback: 97% of flashcard users gave us the top rating, and our AI study partner felt less like a gimmick and more like an extra member of the revision group.

Awards and funding only matter in context. The Student Partnership Impact Award and our teaching grants, aren't usually given to SaaS products, but for projects that shift the way universities think about education. The fact that we won it says less about us chasing accolades, and more about what happens when you take pedagogy seriously.

What excites me most is where this goes next. We're already in talks with module leads, other unis, and in conversations with trusts about how OSCE bots, flashcards and SBAs can be used for live formative assessment. That's a step beyond study apps, but a system that could sit inside medical education itself, supporting learning at every stage.

I never set out to build study software. I set out to stop wasting nights on cards that looked good on a graph but collapsed on the ward. That's why qVault's flashcards exist: mapped, scaffolded, exported into Anki without fuss. If you've ever left the library with perfect stats and nothing to say in front of a patient, try them and see if they survive contact with real medicine.

Because in the end, revision isn't about streaks or dashboards. It's about whether your knowledge holds when someone's listening.



Intimate Partner Violence and Coercive Control: Understanding and Responding Across Healthcare and Society

Meagan Cheadle **MBBS3**

Intimate partner violence (IPV) is abuse within a current or former romantic relationship that 'causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours. Rooted in power and control, this form of abuse is widely understood to be gendered in nature. Women can be the perpetrators of domestic abuse, and men can be their victims, however, the structural inequalities faced by women contribute towards the persisting nature of IPV.

It is important to acknowledge the differing experiences of female victims of IPV: 73.5% of victims of domestic abuse-related crimes from March 2022-23 were women; 93% of domestic abuse-related sexual offences were committed against women; and between 2020-23, an average of one woman per week was killed by a male partner/ex-partner.

Coercive control – criminalised in England and Wales under the Serious Crime Act 2015 – is 'an act or set of acts of threats, humiliation, intimidation and assaults intended to harm, punish or frighten a victim' (Women's Aid, 2018). This form of abuse may occur alongside physical violence or entirely in its absence. Crucially, physical abuse does not define IPV; in many cases, the threat of violence is used to exert control and may emerge months, or even years, after the abuse begins. Unsurprisingly, coercive control is now recognised as one of the highest-risk forms of IPV.

Victims of IPV are often asked, "Why don't you just leave?" This question not only minimises the complex realities of leaving an abusive relationship but also fails to recognise the coercive tactics employed by the perpetrator of abuse. Women do not enter relationships with the expectation of abuse and may not, therefore, self-identify as victims - recognising the insidious shift toward coercion is far from straightforward.

Typically, abuse begins with small acts disguised as affection – such as frequent check-ins, gift-giving, or offering lifts to and from work. This evolves, however, into controlling behaviour that isolates the victim from friends, family, and other sources of support, eventually regulating and dictating every aspect of the victim's life. Each perpetrator denies their partner's autonomy, whether that be through raping their partner, monitoring their partner's whereabouts using technology, or controlling access to vital medication. In healthcare settings, the perpetrators may insist on being present at appointments, and may dominate the consultation, speaking on behalf of their partner.

Victims of IPV often endure recurring cycles of abuse, in which perpetrators focus their control and criticism on the victim's domestic skills, physical appearance, and overall behaviour. This tension, which may 'end' with physical violence is often followed by a period of remorse and the promise that the violence will not reoccur. This is rarely the case; instead, the promise is part of the cycle of abuse that traps women in the relationship. This psychological warfare eradicates the victim's agency – a reality often compounded by the dismissive, misogynistic responses met by victims when they choose to speak out.

Leaving a violent relationship is when the greatest risk is posed to the victim's life. Separation causes the perpetrator of the abuse to lose control – the foundation that IPV is built upon. It takes careful planning – alongside managing the psychologically damaging torrent of abuse – for women to successfully leave their abuser. Removing themselves from the family economy, organising their work life, and arranging plans for children are just some of the many hurdles faced by IPV victims.

As future healthcare professionals, it is essential to protect victims' agency and safety, recognising the signs of abuse as and when they arise. 30% of IPV begins in pregnancy, leading to domestic abuse being routinely asked about in maternity services. However, this is not the case across all areas of healthcare, where opportunities to identify and support victims are often missed. For example, some women who sought help for their mental health from their GP were prescribed antidepressants, beta-blockers, and tranquillisers, without being asked any questions that might have prompted disclosure of the violence in their lives. Routine enquiry about IPV should be standard practice. At worst, it may cause brief discomfort to someone not affected – at best, it could save a life.

Some physical indicators of domestic abuse in a clinical setting are bruises, burns, fractures at various stages of healing, often with vague or inconsistent explanations; injuries that suggest use of weapons, belts, cords, or defensive wounds; or injuries left untreated or presented late. Patients may present with behavioural and emotional signs, such as anxiety, depression, PTSD, sleep disturbances, suicidal ideation, self-harm, or substance misuse. It is important to be able to recognise social red-flags in a consultation. The patient may appear withdrawn from their support systems. Frequent relocations, missed prescriptions, or inconsistencies in health records may also be indicative of abuse. Patients may seem fearful, evasive, or may seek 'permission' from their partner before answering questions.

Attention must be paid to intersectionality and culturally specific forms of abuse. Practices, such as forced marriage, female genital mutilation (FGM), and so-called 'honour-based' killings are forms of gender-based violence that are often misrepresented as cultural norms. It is vital to affirm that violence has no legitimate place in any culture. Racialised and minoritised individuals already face increased vulnerability to abuse and

significant barriers to accessing care. As such, healthcare professionals must make culturally sensitive but non-relativist considerations to ensure these patients are recognised, supported, and safeguarded appropriately.

Trauma-informed care is fundamental for healthcare professionals supporting survivors of IPV. Clinicians must prioritise both physical and emotional safety within the clinical setting, fostering an environment rooted in transparency, honesty, and a non-judgemental approach. Re-traumatisation should be avoided by refraining from asking invasive or unnecessary questions without clear justification and informed consent. Importantly, meaningful support can be offered even without a formal disclosure of abuse.

Healthcare professionals should not attempt to "fix" or "rescue" survivors but instead empower them to reclaim control and autonomy over their lives. This includes providing clear, compassionate information about available options – such as referrals to specialist domestic abuse services (e.g. Women's Aid) – and ensuring familiarity with local safeguarding protocols.

Consent must always be obtained before making any referrals, unless there is an immediate safeguarding concern or a significant risk to life. In such cases, breaching confidentiality may be necessary to protect the patient, but this must be clearly explained – detailing when and why information might need to be shared. Many survivors have endured long-term manipulation, so maintaining their trust is essential.

The importance of clear, objective, and thorough documentation in suspected or disclosed cases of IPV cannot be overstated. Medical records may later serve as crucial legal evidence in securing protective measures such as restraining orders, supporting criminal prosecutions, or informing child protection proceedings. Accurate and sensitive record-keeping is a vital component of both clinical responsibility and survivor safety.

Medical professionals play a crucial role in challenging the cultural and systemic narratives that perpetuate gender-based violence and IPV. This responsibility includes critically reflecting on – and actively addressing – the biases and harmful assumptions that can influence clinical care and medical education. Comprehensive training on domestic abuse and coercive control must be embedded within both undergraduate and postgraduate medical curricula, equipping students with the skills to sensitively inquire about abuse and respond with empathy and effectiveness. Medical education must evolve beyond passive awareness to embrace active accountability, empowering future clinicians to dismantle the societal norms and clinical practices that allow intimate partner violence to persist.

If you or someone you know has been impacted by the issues discussed in this article, support is available through the following services:

Refuge's National Domestic Abuse Helpline: 0808 2000 247
ManKind (Male victims of domestic abuse): 0182 3334 244
Galop (LGBT+): 0800 9995 428
Karma Nirvana (Forced marriage and honour crimes): 0800 5999 247

If you are concerned that a new, former or existing partner has an abusive past you can ask the police to check under the **Domestic Violence Disclosure Scheme (also known as 'Clare's Law').** This is your 'right to ask'. If records show that you may be at risk of domestic abuse, the police will consider disclosing the information.

To intercalate, or not to intercalate...

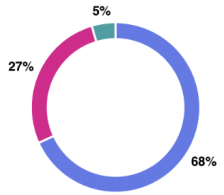
Shriya Karlapudi **MBBS3**

A question that most medical students ask themselves during their early. And who better to guide you than those who've already walked the path?

To help you make this decision, we asked 22 students about their intercalated year.

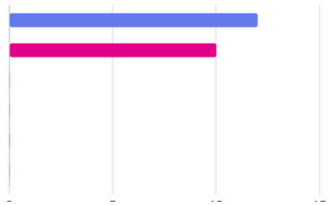
How they found their intercalated year:

Great - no complaints!	15
Good but my experience could have been better	6
Neutral	1
Not so great but I managed	0
I did not enjoy it	0



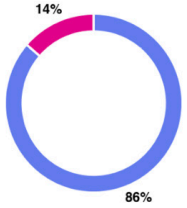
Whether they would recommend that YOU intercalate:

Yes 100%	12
Yes - but with some reservation	10
Neutral	0
No - it isn't worth it for future career prospects	0
No - the time commitment is a lot	0
No - you may not enjoy the degree	0



If they went back in time, if they would still choose to intercalate:

Yes - the same degree	19
Yes - but maybe another degree	3
Neutral	0
No	0



How they would describe their intercalated year in one word:

Here's what some students had to say about their degree:

Pharmacology iBSc – King's College London

"I have really enjoyed my time studying pharmacology and have found it very interesting and relevant to medicine. If I were to change something about my experience, I would have potentially altered my module choices as I did a 75/45 credit split with my dissertation due the day after an exam in January. This was a lot of work and stress!

If you would like to study pharm and have an interest in the lab, I would highly recommend looking at some of the experimental pharmacology modules such as the cardiovascular and inflammation ones - I'm not doing them but the labs sound really good so I wish I was! I would also recommend having a look at other non-pharmacology modules to see if there's anything else of interest. Overall, I'm definitely glad I intercalated, I feel like I've learned so many new skills with writing my dissertation and being in the lab, and I've enjoyed having the 'typical' uni experience."

Anna Shirlaw, currently intercalating

Clinical Neuroscience MSc – UCL

"I completed an MSc in Clinical Neuroscience from UCL. I chose to do this at UCL rather than King's Cognitive Neuroscience MSc because the course seemed more clinical and with less psychology focus, more in line with my interests. I chose to do an MSc honestly just because I could! Although my cohort were the first for whom intercalating wouldn't count towards EPM points for foundation allocation, I thought the research experience would be valuable - and I (relatively easily) got a publication out of it, which maybe requires a lot more initiative and drive if doing a BSc. The fact that this was a taught course rather than research based also made me feel more confident that I could manage it. They start at the beginning with lots of topics, including the research methods and stats.

My advice for anyone wanting to do this course is that if neuroscience is interesting to you, go for it! It really is at the right level for us after our 3rd year - it's not an impossible level of academia. I would only make sure you feel comfortable with the fact that this is a long course - 14 months - and so there's some overlap at the end where you're finalising your dissertation and starting 4th year of med. It's absolutely manageable if you're making good progress with the dissertation before August, but it's worth knowing that you do give up your summer holiday either way.

In conclusion I learned a lot of cool neuroscience and learned some really valuable research and stats analysis skills from this course, and I'd really recommend it. Honestly, I think I found this course great and cool and interesting because I think neuro is great, cool, and interesting, which applies to any course - if you love it, you'll love it anywhere. :)"

Pryanka Sood, Year 5 MBBS

Cardiovascular Sciences MSc – King's College London

"If you're considering the Cardiovascular Sciences MSc (previously known as the Cardiovascular Research MSc), there are a few important things to keep in mind. This course will equip you with invaluable skills, such as lab techniques, critical analysis of scientific papers, and research methodology. However, it is extremely content-heavy, with frequent exams (timed essays) and multiple deadlines (coursework and oral presentations). If you're looking for a relaxed or easy-going intercalated year, this is probably not the best choice.

That being said, this MSc is a fantastic opportunity if you're genuinely interested in cardiology/ Vascular as a potential career path, want to develop research skills, or want to network with leading experts in the field. However, I would strongly advise against intercalating in this MSc for the wrong reasons. If you're considering it solely because it looks good on your CV, because your friends are doing it, or simply because you're unsure what else to choose, then it may not be the right fit. Additionally, for those thinking about it purely for application points, it's important to know that intercalated MScs do not contribute points for certain applications, such as IMT.

For me, knowing all of this, I still chose to pursue this MSc because, while I'm not set on a particular specialty yet, I know I enjoy learning about cardiology and wanted to explore it further. If you have a similar curiosity and motivation, this MSc could be an excellent choice. I hope this helps, and best of luck with your applications - you've got this :)"

Zalanda Shinwarie, currently intercalating

Cardiovascular Medicine iBSc – King's College London

"I did really enjoy my course and loved the practical aspects including echocardiography and Point of Care Ultrasound however found there was a large amount of content to learn with the lectures and having exams continuously, even 2 weeks after the dissertation deadline, and that these exams required essays and short answer questions.

The advice I have is to always research what it is you want to do and see if external universities offer it (I always had an interest in medical education through the work I did as part of the MSA and should have considered other options outside of King's) but always discuss this with friends, family and your personal tutor to find the best course for you. Also don't be afraid of doing a Masters as well if you want something go for it."

Anonymous

Public Health MSc – London School of Hygiene and Tropical Medicine

"I completed an intercalated MSc in Public Health at the London School of Hygiene and Tropical Medicine in 2023/24. My top tip to students is to research your degree! I spent a lot of time researching different intercalated degree options and quickly realised I wasn't interested in doing a speciality specific intercalated degree. In fact, the only 2 courses I applied to were Public Health and Genetics – complete opposites but neither focused on any one speciality. This thorough research meant I knew what to expect from my degree and enjoyed it. My favourite part of the course was integrated humanities-based subjects with medicine – such as health economics, health policy analysis, etc.

If I could go back, I would explore some universities outside of London as well - it may have been a fun change for a year."

Arisma Arora, Year 4 MBBS

Primary Care iBSc – King's College London

"I found the Primary Care intercalated degree at King's to be a real gem. The course provided a great balance between clinical and non-clinical aspects of primary care, with weekly GP placements complementing broader learning on topics like health inequalities and teaching in primary care. While research methods wasn't the part I was most drawn to, it proved invaluable in improving my ability to critically read and write publications. The team was incredibly supportive, and I wouldn't change anything about the experience. For anyone considering this course, it's a fantastic opportunity to develop both clinical skills and a deeper understanding of primary care. Additionally, it allowed me to organise my elective within London, which was a huge plus."

Calum Singh, Year 5 MBBS

Pre-Hospital Medicine iBSc – QMUL (Barts)

"I spent a year intercalating in Pre-hospital Medicine at Barts! (QMUL). In all honesty, it was a slight Hail Mary after falling a little out of love with a medical degree after placement in stage 2 not completely living up to my expectations, so I wanted to go for a degree that was very hands-on and I could get a lot of physical skills out of - and I did! It was a great holistic experience of patients in their out-of-hospital and ED treatment processes. It also gave me great insight into the work of the London police, paramedics and the LAA giving me a greater understanding of how to work with other health care professionals and truly understanding the decisions all first responders make to bring the patient to hospital.

It was an intense degree, I saw a lot of blood, some emotional situations and a lot of early morning trips to McDonald's post night shifts - but the support they gave me was incredible - I would recommend it to anyone, even if emergency medicine as a career is not exactly what you want – it's not what I want to pursue so there you go!"

Ella Job, Year 4 MBBS

Regenerative Medicine & Innovation Technology iBSc – King's College London

"I'm currently undertaking iBSc Regenerative Medicine & Innovation Technology at King's College London. I've really enjoyed my course! I think it's really interesting to learn about such a new and continuously changing field from experts in the field. My advice to anyone doing this course in the future is to keep on top of the lectures as it really aids essay writing. Also to always advocate for yourself and your learning/research!"

Anonymous

Sociology and Politics of Medicine iBSc – UCL

"I found my degree at UCL so enjoyable. I got to explore philosophical, ethical, political and journalistic dimensions to science and medicine. These modules allowed me to follow my interests outside of clinical medical and now I feel more equipped for choosing my future career path.

I would do this course again with no reservation however I only wish I had explored more courses as there are so many out there to choose from. My reservation would just be a general one regarding funding etc...as I was not aware prior to intercalation that our funding drops significantly from year 4 to year 5 of study.

I'd urge everyone who is interested in the humanities side of medicine to pursue this degree! We work with people all the time and in my opinion the best clinicians are socially/historically/politically aware as well as clinically aware :)"

Ellen Martin, Year 4

History and Philosophy of Medicine iBSc – UCL

"My course was really enriching. I applied to intercalate externally at UCL who offered the course, as history and philosophy was not something offered to intercalating students at King's. I studied what is known as HPS (History and Philosophy of Science) but with a medical focus, looking at the specific historical and philosophical aspects of medicine. The course was unique as it put you shoulder to shoulder with philosophers, sociologists and historians. I developed analytical skills in both history and philosophy and also sharpened some skills by taking modules in Social Epistemology and Sociology of Digital Technologies. The culmination of the degree was a 10,000 word dissertation for which I chose to look at how the idea of public health developed in Cardiff in the early 19th century, blending tools I had learnt from both history and philosophy. I wouldn't change anything at all about my degree and thoroughly enjoyed my time at UCL, taking part in Jazz society and musical theatre society, starting as keys 2 for 'Birds of Paradise' and finished the year as assistant musical director/keys 1 for an original musical called 'The Perfect Cake'. My advice to people who are interested in both topics would be to speak to your personal tutor. The first question I had for mine was should I study a BSc or an MSc. Their answer was: would you rather a pass or merit in a Masters, or a 1st in a BSc? The second question I had was: should I stay or should I go? Their answer was go and experience something different. I cannot recommend intercalating enough to those wanting to try something different. You only get ONE chance at medical school and intercalating, so grab the opportunity by the horns! Do get in contact if you have any further questions about the actual course on email morgan.bailey@kcl.ac.uk."

Morgan Bailey, Year 4

Choice, Care and Consequence: How Philosophy and Ethics Shape the Assisted Dying Debate

Tasniem Sidiq **MBBS2**

Assisted dying is not an abstract question of law or policy. It concerns the most profound experiences of humanity: the suffering of terminal illness, the courage of patients in decline, and the love and heartbreak of families who walk beside them. Their stories lift the debate from the halls of Parliament into everyday lives, confronting us with the realities of hardship, the meaning of dignity, and the weight of the choices we make. It is for them- and for all of us who will one day confront mortality- that this debate matters.

This June, the Assisted Dying Bill reached the House of Lords, having been carried forward from the House of Commons by Labour MP Kim Leadbeater. Such progress is rare, as in the past 15 years, fewer than 5% of Private Members' Bills have ever become law. That this one has advanced so far reflects the renewed urgency of the issue and its deep significance to public opinion.

The discussion unfolds across traditions of philosophy such as Utilitarianism, Deontology, and Natural Law, but also through the practical lens of medical ethics: autonomy, beneficence, non-maleficence, and justice. Humanist perspectives, virtue ethics, and the voices of disability rights advocates add further dimension. Together, they remind us that this is not only a matter of abstract theory, but of real people, real patients, and the values that guide their care.

Heading the drive for this legislative change is the principle of patient autonomy: the right to hold the ultimate decision about one's own medical care, often seen as a reflection of Kantian liberalism. It echoes the wider shift in medicine from paternalistic models to more patient-centred frameworks. Few arguments feel more compelling than this: the ultimate respect for individual values and wishes. Yet autonomy in healthcare is rarely simple. The fear of being a "burden" to family, inequitable access to palliative care, and the uneven resources across the NHS often shape the choices people feel able to make. In the shadow of these social pressures and systemic gaps, is autonomy truly upheld?

Autonomy, however, is only part of the ethical equation. Medicine is also bound by the twin duties of beneficence and non-maleficence: to do good and to avoid harm. Proponents of assisted dying argue that when medicine can no longer cure, the greatest good may lie in relieving suffering, even if that means hastening death- a view not far from utilitarian reasoning, where reducing suffering is a moral imperative. Opponents, however, counter that deliberately ending a life cannot be reconciled with the Hippocratic duty not to harm- a stance that echoes deontological perspectives, where certain acts remain impermissible regardless of outcome. They warn that transforming doctors from healers to agents of death could erode the trust on which the profession depends. The question, then, is not simply "what is good?" or "what is harm?" but how these ideas are defined at the end of life, and who is empowered to decide.

Yet ethics is never confined to individual choices or professional duties alone. It also extends to the broader structures of healthcare- the question of justice. It demands that care is not only fair in principle, but equitable in practice. A microsimulation study on palliative care in Ireland projected that "the number of people living and dying with serious illness will increase approximately 70% over 20 years," with per-capita annual costs expected to "increase substantially due to ageing populations and growing complexity." The UK faces similar pressures. As need grows and resources stretch, the danger is that inequalities in access to high-quality palliative care will deepen. For justice to be preserved, the right to choose at the end of life must be matched by safeguards against systemic inequality: equal access to comfort, dignity, and support. Assisted dying should never be seen as a substitute for palliative care, but debated alongside a commitment to strengthen it.

It is here that the voices of disability rights advocates are particularly important. They have long raised some of the most persuasive objections to assisted dying. Their concerns are grounded in lived experience of how society perceives disability, dependence, and value. Many fear that legalisation risks reinforcing the message that some lives are less worth living and that vulnerability or reliance on care equates to diminished dignity. The pressure may not always be overt, but it can be felt in subtle ways: in the fear of being a burden, in the weight of economic cost, in the quiet suggestion that choosing death is the "responsible" option. These voices remind us that autonomy can only be meaningful if it is exercised free from coercion and coercion is not only legal or medical, but also social. Any framework for assisted dying must therefore be built with the strongest possible safeguards, and with an equally strong commitment to affirming the value of disabled lives.

The debate over assisted dying confronts medicine, law, and society with questions that are both philosophical and deeply human. As future doctors, you will see how these principles: autonomy, beneficence, justice, and more, play out at the patient's bedside. The Introduction to Values-Based Clinical Practice module in first year is a perfect introduction to these frameworks, showing that philosophy is not abstract: it shapes the choices, care, and consequences of real people every day. So, I invite you to engage with these arguments, reflect on your values, and consider how compassionate care is informed not just by skill, but by ethical understanding.

For the people in my life touched by terminal illness, your experiences of courage, love, and loss inspire this discussion.

Medical Students' Association President Welcome Message

Maheen Siddiqui **GKTMSA President 25-26**

Welcome to GKT!

Hiya everyone; my name is Maheen, and I am the President of the Medical Students' Association (MSA) this year. I want to start by saying a MASSIVE congratulations on getting into the best medical school ever (of course, this is totally not biased).

As you step into this new chapter, take a second to be so proud of all that you have put in leading up to this amazing accomplishment – from memorizing the Krebs cycle 6 million times to refreshing the UCAS page at 5 AM before the staff were even awake, you have put in so much time, effort and dedication towards this. You truly deserve to be here and have earned this moment!

Starting medical school can bring on a whole rollercoaster of emotions: the excitement of finally starting something you have looked forward to for so long, mixed with the stress of such a big change in your lives. But fear not - your MSA Committee, along with the entire medical school community, is here to welcome and support you every step of the way. Whether it's mastering the Krebs cycle (again), navigating your way around campus or figuring out what the best events are (after the MSA ones, of course), whatever you need, we have got your back!

A quick intermission to tell you what we actually do: the GKT Medical Students' Association (MSA) is an association run by students, for students. The largest academic association at King's, we have one main aim: to improve the lives of GKT medical students by ensuring their social, welfare, academic and other needs are met at all times.

With a variety of streams (including education, events, welfare and so many more), we are here to make sure you feel supported, connected and have plenty of fun throughout your time here at GKT! You'll hear lots about the different things we do but for now, just know that if you ever need anything, the MSA is the place to turn - and if you want to get involved, there is always space for you. You can stay up to date with all things MSA by following us on our Instagram @ gktmsa.

Although the degree may initially seem like a long time, it totally flies by (cliché, I know - but genuinely) and you'll be in your cap and gown before you know it (by Vivienne Westwood, of course). So make sure you enjoy the journey and make memories that last longer than our retention of the Krebs cycle (okay, I think that's enough Krebs cycle jokes for the day). Use your time to meet new people, make the most of every opportunity and have fun! Try that new sport (even if you're crazy unathletic like myself), go to that event (you may meet your new best friend), and join that society - King's truly has it all!

From asking questions to just wanting a chat, or anything and everything in between, please feel free to reach out to us via msa@kcl.ac.uk and/ or maheen.1.siddiqui@kcl.ac.uk at any point throughout the year!

From myself and the amazing 2025/26 MSA committee, we wish you an unforgettable first year and a GKT journey full of memories, learning, laughter and friendships that last a lifetime!

Lots of MSA love,
Maheen

The Conservation Room of the old Dental School in Guy's at around the turn of the century

Dental Corner

Photo: UMDS Volume 101 No 2369, 31st of January 1987

KCLDAA Weekend 2025

Jing Yuan Chan **BDS5**

Thanks to the generous sponsorship of Professor Stephen Challacombe, I returned this March to the annual King's College London Dental Alumni Association (KCLDAA) Weekend, a two-day programme that once again brought together students, staff, and alumni in Guy's Tower (and beyond!). This year's theme, "The Patient Journey", was explored through a varied programme of lectures, workshops, and social events.

Friday 7th March: Clinical Open Day and Staff and Alumni Drinks Reception

The Friday Clinical Day featured contributions from various dental specialties, but the session I was able to attend was Professor Ama Johal's lecture on sleep apnoea. As someone with an interest in orthodontics, I found his career trajectory inspiring: a consultant orthodontist by background, Professor Johal has since expanded into sleep medicine, illustrating how the specialty can extend beyond occlusion to intersect with systemic health and overall quality of life. He highlighted how craniofacial structure, obesity, and lifestyle factors can predispose to airway collapse, which ranges from benign snoring to life-threatening obstructive sleep apnoea (OSA). I was particularly surprised to learn that snoring itself is a risk factor for cardiovascular disease and type 2 diabetes in the sleeping partner! Management, whether through continuous positive airway pressure (CPAP) or surgery, aims to restore normal oxygen saturation and safeguard the wellbeing of both patient and partner.

The evening culminated in the Gala Dinner at the Hilton Tower Bridge, where alumni gathered in high spirits. The Class of 2005 were particularly enthusiastic in celebrating their reunion, and it was heartening to see graduates travelling from near and far to reconnect with old colleagues. Dinner was accompanied by excellent choral duets from familiar faces Tomos Lavery and Ben Smith, and it was also a poignant moment as Charlie Spedding concluded her two-year term as KCLDAA President, formally passing the role to Dr Jonathan Turner. The Alumni Awards were also announced, recognising Dr Pepe Shirlaw MBE as Alumnus of the Year, and Professor Gordon Proctor as Distinguished Alumnus.

Saturday 8th March: Clinical Open Day and KCLDAA AGM

The second day carried the theme "Beyond the Smile". Proceedings began with the Rod Cawson Lecture, delivered by Mr Anish Shah, Consultant Oral Surgeon. As a BDS4 student at the time, this was of particular value to me as I was preparing to sit my exams in oral medicine, and Mr Shah's clear exposition of orofacial lesions, systemic associations, and clinical decision-making provided a timely recap of the material I had been revising throughout the year!

We then shifted our attention to broader systemic considerations, where Dr Federica Amati's lecture "Why You Need to Care About Gut Health" explored the influence of diet, antibiotic use, and ultra-processed foods on long-term outcomes. This was followed by Professor Mark Ide's Walter Herbert Lecture on "Oral Health, Oral and Gut Microbiome and Systemic Outcomes", which examined the evidence linking the periodontal microbiome with systemic disease. The morning concluded with the Dean's Lunch, before the day ended with tours of the Haptics Suite and Guy's Tower.

I remain grateful to Professor Challacombe for his sponsorship, and I look forward to next year's Alumni Weekend, which promises to be particularly special as it marks 300 years since the first patients were admitted to Guy's Hospital!

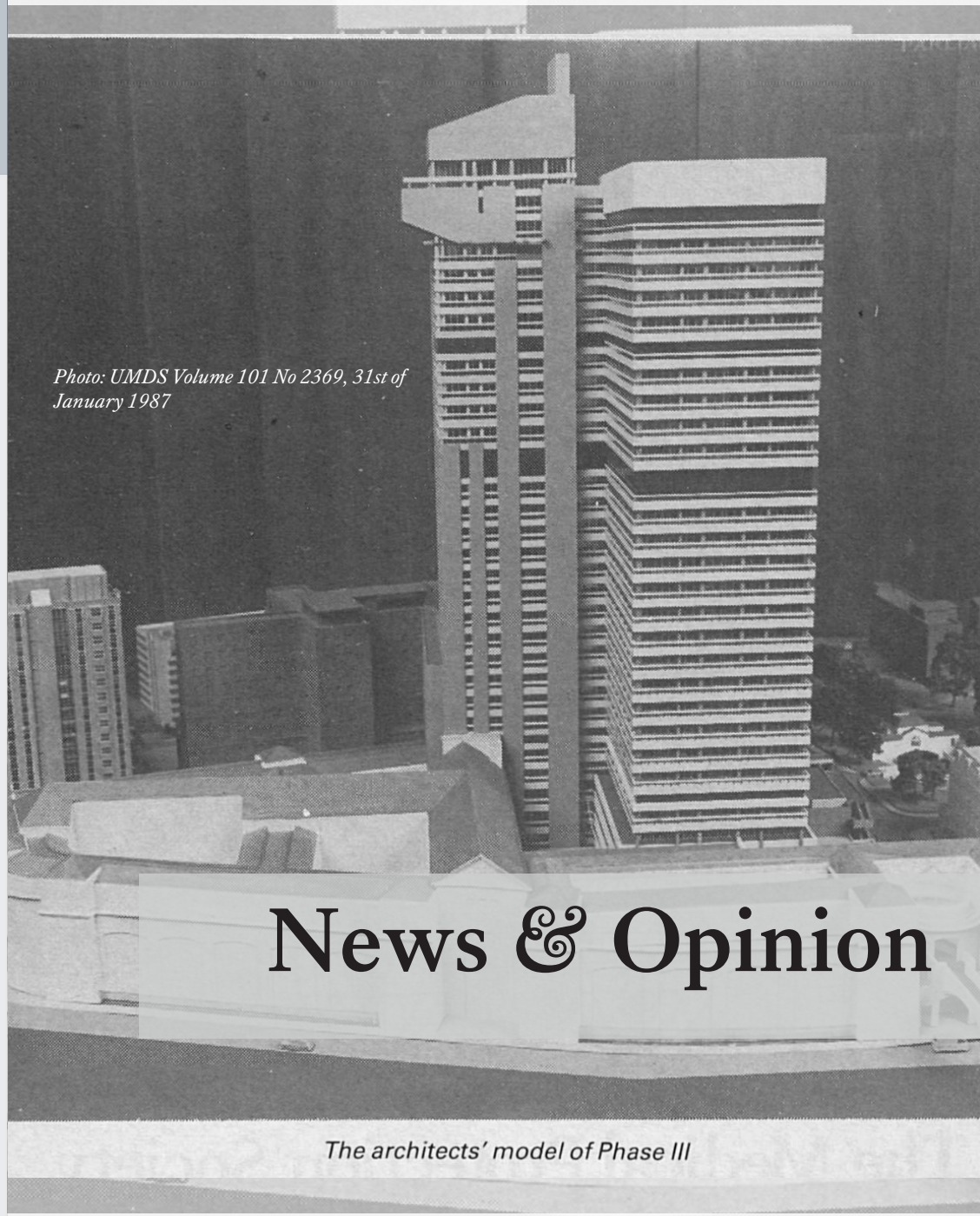


Photo: UMDS Volume 101 No 2369, 31st of January 1987

News & Opinion

The architects' model of Phase III

The Leng Review, Evidence and Recommendations: More Muddy Waters Ahead

Ellen Martin **MBBS4**

On July 16th, the long awaited Leng Review was published. Spearheaded by Professor Gillian Leng, this was an NHS commissioned independent review into the safety and effectiveness of the Physician Associate (PA) and Anaesthesia Associate (AA) roles. In this article I hope to provide some insight into the evidence used within the review, as well as into the subsequent recommendations made by Prof. Leng.

PAs and AAs have been operating for around 20 years now in the NHS. With regard to the PA role, what started as two US-trained PAs working in a Tipton GP practice has now become over 3,000 qualified PAs working in around 40 specialties across primary, secondary and tertiary care centers. This expansion of medical associate profession (MAP) roles has been driven primarily by NHS England and the UK government- under the rationale of filling service gaps and alleviating pressure on doctors. This rationale has faced critique, with many doctors arguing these 'gaps' and 'pressures' would not exist if effective workforce planning was in place within the medical profession- considering the context of stagnant training places etc.

Concerns regarding the safety and scope of these roles have been present for over a decade within the medical community. After the 'NHS Long Term Workforce Plan' was released in 2023, with recommendations to expand these roles further, the BMA and various Royal Colleges released statements expressing their anxieties, and the need for a rapid review of the situation. Recent media coverage of patient incidents has also foregrounded these conversations in the public sphere and arguably forced the government to act.

Evidence and Opinion:

The review detailed the existing research into the safety and effectiveness of the PA and AA roles to be limited, generally low quality, and either inconclusive or demonstrating a 'mixed picture'. Across the literature, it seemed there had been little attempt to account for variation in supervision, case mix, or patient outcomes.

The BMA, along with many doctors speaking independently, have remarked this relative dearth in research to reflect a clear dereliction of duty to patient safety by top decision-makers in the sphere- such as within NHS England and the Department of Health and Social Care (DHSC).

Leng commented that even in attempting to mitigate difficulties in interpretation, the evidence did not allow for firm conclusions to be made; She quotes the example of more PAs than expected being named in Regulation 28 reports, but fewer PAs than expected being cited in never events. Regulation 28 reports, also known as 'Prevention of Future Deaths' reports and include such cases as (are notable for cases such as) the death of Pamela Marking who was misdiagnosed by a PA in A&E. At the time, Pamela's family assumed the PA to be a doctor.

In canvassing patient and public opinion, the review recognised identification to be a main concern (primarily regarding the PA role), alongside barriers to care and confidence in practice. Many patients reported confusion over who they had seen in practice (often confusing PAs for doctors), with this confusion often persisting even after PAs had introduced themselves and their role. This links closely with the widespread lack of clarity and understanding regarding the scope of the role and may explain why, in general, patients reported feeling less confident in seeing a PA for a new or complex condition. Regarding barriers to care, some patients felt their care often took longer if they were seen by a PA, as they had to wait for a GP to sign off their prescription or see them for an additional follow-up appointment. Overall, however, the review found patients 'tended to be satisfied after seeing a PA'.

A majority of the expert medical opinion platformed in the review also highlights these 3 concerns, with a focus on the lack of scope for the roles. In surveying both PAs and doctors, asking what activities they believe are appropriate for PAs to undertake, there was a notable gap in perception between the two (figure and table 12 of review).

In the context of this uncertainty, doctors are facing pressures and anxieties related to the supervision of PAs. There is currently no training for doctors related to the supervision of MAPs, no time allocated for such supervision, and little guidance on what activities fall under the roles' scope. Yet, supervising doctors retain responsibility for overall patient management and may be legally responsible for the care provided by their supervisee.

Many doctors who engaged with the review also shared concern regarding intersecting issues related to resident doctor training, NHS sustainability, and poor workforce planning leading to workforce substitution. The latter has been evidenced in circumstances where trusts have recorded filling gaps in medical rotas with PAs- seemingly without regard for the fact PAs receive markedly less training.

Again, top decision-makers in the NHS, DHSC, as well as in certain trusts, have been criticised for constructing the current situation through years of poor decision-making.

Recommendations:

Prof. Leng made 18 formal recommendations in the review.

Most notably, was for the role of Physician Associate to be renamed as 'Physician Assistant and for the role of Anaesthetics Associate to be renamed as 'Physician Assistant in Anaesthetics' (PAAs), with the aim of minimising the confusion of PAs and AAs with doctors. In line with this rationale, another recommendation was for

the rollout of standardised identifying measures for PAs, such as identifying lanyards, clothing and staff information.

In regard to the scope of the PA and PAA roles, Leng recommended respective permanent faculties be established and set standards for the roles, as well as to provide training and credentially (with standards being overseen by 'a relevant Royal College' and the Royal College of Anaesthetists respectively).

There are not a lot of specifics regarding what these standards should look like, however, the review clearly recommends that Physician Assistants should not see undifferentiated patients except within clearly defined national clinical protocols. Almost all safety concerns heard by the review team surrounded diagnosis and initial treatment, and both the Royal College of Emergency Medicine and the Royal College of General Practitioners agree that the risks and consequences present at this stage in patient care require more extensively trained staff.

Many members of the PA profession have understandably been taken aback by this, as for some this will mean a curtailing of their clinical responsibilities.

The review does, however, take steps in its recommendations to ensure PAs and PAAs should have opportunities for ongoing training and development within the context of a formal credentialing and certification programme. Leng also recommends for both roles to have the option of a band promotion in the form of a 'Advanced Physician Assistant/ Physician Assistant in Anaesthetics' role.

Among the recommendations for 'general system-wide changes' were calls for the DHSC to establish a nationally set vision on how medical and MDTs should operate in the future, with the intention of supporting doctors to oversee, lead, or use their specialised skills more effectively . 'Greater support for doctors as leaders and line managers' was also recommended, as to increase their competency and confidence in fulfilling supervisory roles.

Most importantly, the final and arguably most overdue recommendation is to ensure safety systems routinely collect information on staff group(s), to facilitate monitoring and evaluation on a national level against patient safety standards. This would allow the recognition of system-level issues within MDT working; within the current system, where many professionals are afraid to speak out on possible patient safety issues, Leng hopes system-wide monitoring by staff group will allow earlier identification of systematic errors.

In concluding the review, Leng provides various relevant regulatory bodies with responsibilities regarding her recommendations. She expressed hope that the review may act as a reset button on heated conversations and that involved parties may work together so that long-term sustainability of the NHS is ensured.

It's still early days, but most of what was determined by the review has been accepted by the UK government along with many medical professional bodies. The BMA argues the review could have gone further in pushing for authoritative, nationally agreed scopes- with anxieties persisting around local trusts stretching standards at their own discretion. Conversely, the trade union representing PAs (led by general secretary Stephen Nash) recently led and lost a high court bid to temporarily block NHS England from proceeding with recommended changes to the role.

Even with some remaining disagreements, this review may mark an important turning point in the regulation of staff groups working within the NHS. At the very least, it should bring forth changes that ensure a higher level of patient safety and care.

Here's hoping the government, NHS, and other regulatory bodies can work quickly and effectively together on these...

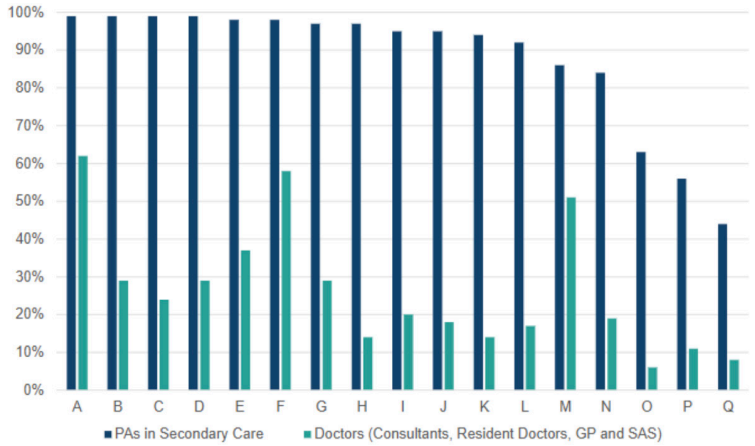


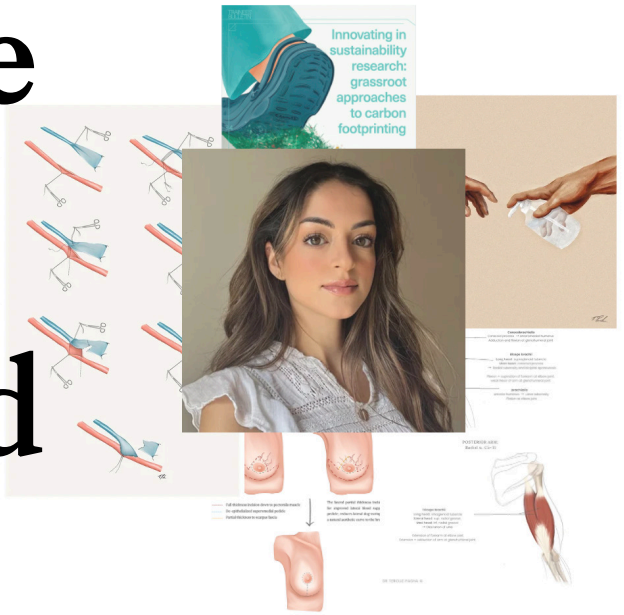
Figure 12 of the review: Appropriateness of potential Physical Associates activities in secondary care given by respondents in the survey (refer to Key in tabel 12)

Activity	Key to the graph above	PAs in secondary care (%)	Doctors in secondary care[w] (%)
Provide health promotion and disease prevention advice to patients	A	99	62
Perform physical examinations on patients	B	99	29
Provide clinical assessments on patients	C	99	24
Review test results	D	99	29
Take medical histories from patients	E	98	37
Support innovation, audit and research	F	98	58
Interpret, monitor and respond to clinical readings and patients' parameters	G	97	29
Develop management plans	H	97	14
Manage care for patients with long-term chronic conditions	I	95	20
Perform diagnostic and therapeutic procedures	J	95	18
Diagnose illnesses	K	94	14
Teach, supervise and assess other team members	L	92	17
Deliver immunisations	M	86	51
Provide contraceptive services	N	84	19
Deliver antenatal care	O	63	6
Order ionising radiation	P	56	11
Prescribe medications	Q	44	8

Table 12 of the review

An Interview with Dr Terouz Pasha:

Inside Her World



Noor Amir Khan **MBBS4**

Anatomy and editorial illustrations by Dr Terouz Pasha

A Plastic Surgery Resident and Illustrator based in London, Dr Terouz Pasha took the same steps as you and I: through the uniquely pink Greenwood Lecture Theatre, the chaos of New Hunt's House Library and our exclusive Gordon Museum. Our paths first crossed in Winter 2022, when I attended an Art Workshop she hosted for KCL Anatomy Society during Mindfulness Week. A highlight of my First Year experience, my friends and I were guided through inspecting, observing and completing studies of our hands in different poses. Sketching away, we were captured by Terouz' narration as she interweaved Art and Medicine through her ventures as a medical student and doctor.

Two years later, in the run-up to Third Year's infamous January Exams, I found myself revisiting the stories she shared. To my surprise, I recognised myself within her descriptions and connected with them increasingly: *"I found myself spending 12 hours in the library every day studying. I started doing really well in my exams, but I felt so empty inside [...] I remember one day coming out of work and just feeling like a robot".* Nevertheless, whilst this low point felt all too familiar, her resolution was more comforting. Having set aside her hobbies in pursuit of academic success, Terouz decided to start filling her cup again. She started to draw and, amongst the fluctuating terrain of cobblestoned years passed, hasn't really stopped since.

Away with the Fairies

As I prepared for our interview, I wondered why Dr Pasha stuck with me after two packed years of change, life experiences and Medical School. Yet, upon reflection, I realised it was her authenticity. To maintain an openness and vulnerability in fields that often demand perfection is no mean feat.

This characteristic was inherent throughout our conversation, even from my very first question: how would your friends describe you? I was greeted with a spectrum of qualities. *"Passionate and positive, yet sometimes quite aloof and in my own world. I dance to my own tune".* Whilst some may view these as contradicting and conflicting, I found Terouz' perspective refreshing. *"I've got many sides and we're all multidimensional. So I can be very focused and deeply passionate otherwise I wouldn't be able to be a surgical trainee, right? [...] But when I'm relaxed, maybe I embody a different personality".* She went on to explain the importance of compartmentalisation: recognising that different environments bring out different aspects of who we are, and learning to value each of these sides. In a system that often rewards specialism over generalism, her perspective offers a rare and generous middle ground.

As our discussion progressed, this theme deepened - a willingness to embrace not only the distinct aspects of identity, but also the grey areas, uncertainty and fluidity between them. This was, in fact, at the very heart of why she pursued Medicine in the first place: the '*true combination of art and science' meant that she 'didn't have to give up any aspect*'.

As we explored, however, committing to this philosophy does not come without its challenges.

Creativity in Practice

For Terouz, road blocks appeared at several points in her journey. As previously referenced, she faced burnout when approaching her Third Year exams. Yet, following the decision to fill her cup, she found herself channelling a '*naive curiosity*', building the courage to purely, wholly just create.

Along the way, she began to share her '*little drawings innocently*' online. This quickly picked up pace, culminating in a commission from the Royal College of Surgeons during medical school. Since then, she has designed a diverse selection of front covers for the *Trainees' Bulletin* (alongside other medical publications), drawing connections between surgery and a wide range of themes. From global health and education to technology, climate change and sustainability, her portfolio bolsters outlandish creativity whilst sparking reflection and dialogue.

The second hurdle came later, after graduating early in April 2020. Working as an F1, distanced from her support system and navigating grief on the wards during the first wave of COVID, she stopped making art for 1.5 years. Despite this, the threads of her reflection were weaved with a radical acceptance that I found striking. She described how, in a chronic state of '*fight or flight*', creativity and self-care can easily be left behind. '*How much art I do is always a measure of how happy I am, how much stress I have in the world... And that's hard as well isn't it?*'

She touched upon an ironic truth. Whilst art can serve as an outlet in times of stress, it also requires sufficient *'space in your day and boredom, more than anything'*. Without that space, it is inevitable that momentum stills, stagnancy snowballs and, even the desire to create begins to fade.

To conquer this struggle, Terouz was prescribed no magical solution. Rather, she embarked on a self-driven, '*unromantic*' process fuelled by

honesty. From slipping across sand-dunes of external validation to sinking in perfectionist quick-sand, she ambled across starts and stalls, peaks and troughs in an endless desert of ideas... She likened the experience to overcoming the '*action potential*' involved in restarting studying or exercising: '*You just need to get up and do it and the rest will follow. And you need to trust that the rest will follow'.*

She was right, of course - for, eventually, mirages fade and deserts bloom.

In Terouz' case, her breakthrough was falling in love with the process itself. As she explained, *'80%*' of this involves observing life outside pen on paper. Not touching tools, not starting, but slowing down and reflecting on her surroundings. For her, she described a return to forgotten worlds - trees' shifting leaves, water flowing down riverbanks and light's great escape. Awakening to the conversations between the natural and man-made, only to leave infinitely richer. Truly, a *'life unobserved is a life not lived'.*

This artistic lens has since coloured her endeavours with deeper meaning. For instance, *'seeing a task through'* and *'having control over that period of time,'* have brought power to pockets of mindfulness amidst all the noise. In Medicine, the same attentiveness has allowed her to listen more closely to patients, paving the way for a deeper understanding of their needs, diagnosis and treatment.

I also noticed that Terouz' varied inspirations mirrored her multifaceted personality. Alongside nature, her work in plastics plays a considerable role in her public presence as an artist: contemplating the human body, its form and, particularly, hands. (Plastic surgery involves a lot of hand surgery, I'm told!) Yet, her favourite pieces are the ones that never see the light of day. These are incredibly personal - re-exploring her travels through canvas or honouring her relationships with friends and family. For the everyman, this sentiment extends a warm embrace: beyond experience, recognition and technical skill, intention carries the artist to what is truly liberating.

Standing Where You Are

Having delved into Terouz' creative journey, our conversation pivoted to her surgical career. Yet, for her, these pursuits remain inevitably intertwined.

Despite the specialty's niche nature and its lack of exposure during medical school, Terouz decided to pursue Plastic and Reconstructive Surgery. Combining *"creativity"* and *"forward thinking,"* whilst being *"very skilful and practical,"* it aligned strongly with her personality, academic interests and hobbies. Additionally, the decision drew upon her past experiences and the specialty's historical roots. Terouz explained, *"Modern plastic surgery itself was born out of a need to help wounded soldiers in the Second World War [...], helping people in the harshest of environments"*. As a Kurdish refugee, Terouz described her motivation to provide equitable means to healthcare in conflicted areas and resource-poor settings. To her, surgery serves as the *"epitome of being able to achieve that"*.

The process of creating her book series, *'Essential Anatomy, Illustrated,'* is a prime example of this. As a GKT Student, I was also particularly excited to deep-dive into this project as Dr Alistair Hunter* was involved in its review for publication! Nevertheless, I discovered that the book originated from a place of frustration. Approaching her MRCS (Membership of the Royal College of Surgeons) examination in Foundation Year 1, Terouz was shocked. Whilst living on an F1 salary, she found herself facing extortionate exam fees alongside a bombardment of post-graduate courses - all promising to *'get you in [...] for only £3000'.* Exploitative and unfair in nature, she decided to waive the courses in favour of forging her own path. However, whilst online resources were useful for text-based information, the quality of anatomy diagrams available was poor. Stressing the importance of anatomy as a *'visual learning exercise,'* Terouz consequently created her own sketches - and used these to pass the exam!

[*Dr Hunter was a Senior Lecturer for Anatomy and an Academic Manager of the dissecting rooms at GKT. Having retired in 2024, he was a cornerstone of the faculty and had an immeasurable impact on the experience of countless students across his thirty years at King's.]

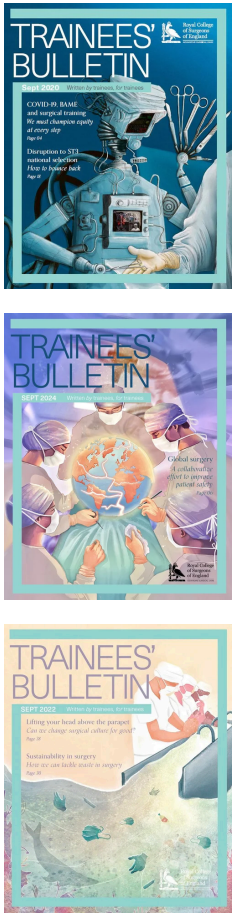
Sharing her MRCS drawings online, Terouz noticed that they garnered significant interest. Driven by her strong belief in *'accessible, free education,'* she took on the hefty task of producing a book focusing on the anatomy of the upper limb. She compiled the drawings, validated them with Dr Hunter's help and shared the book for free. Its impact superseded her expectations - whilst used by local medical students and fellow NHS trainees, it was also picked up internationally. In particular, by the UN Global Surgery Learning Hub: a platform providing educational resources and training opportunities for healthcare workers in low- and middle-income countries. Her book has been incorporated in their courses, her technical drawings now being used to *'train surgeons from all around the world'.*

As our discussion approached its close, I thought back to where we had started... Empty library days and creative uncertainty to priceless personal pieces and international impact - and I asked, considering it all, *"What makes medicine meaningful for you now?"*

"A simple thank you from a patient after you've helped them, even just by listening. Nothing quite compares to being face to face with another human and offering your service to them. That's where medicine and creativity truly meet: empathy and human connection.

It's what life is all about."

Find Dr Terouz Pasha @terouzpaints or www.terouzpasha.com

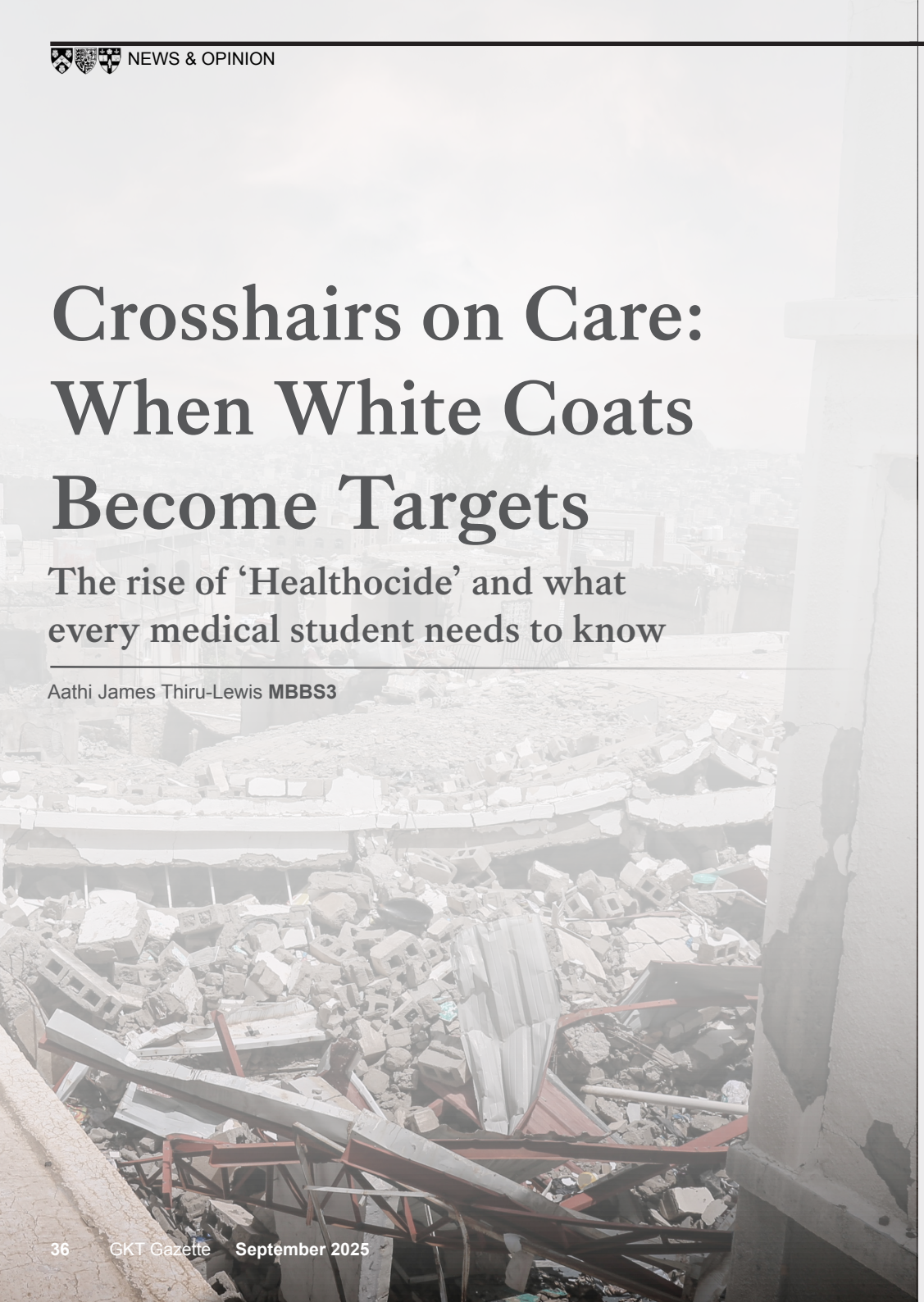


Trainee' Bulletin front covers by Dr Terouz Pasha

Crosshairs on Care: When White Coats Become Targets

The rise of 'Healthocide' and what every medical student needs to know

Aathi James Thiru-Lewis **MBBS3**



On average, WHO records a verified attack on healthcare multiple times daily. The organization has documented over 2,800 such attacks since 2022, killing hundreds of medical workers simply for trying to heal. In Gaza, Palestinian health authorities report that approximately 1,000 healthcare professionals have been killed since October 2023—rates that multiple organizations describe as among the highest recorded in modern conflict.

Once, the white coat was a shield. Today, it's a bullseye.

In 1859, Henry Dunant walked onto the battlefield of Solferino and saw wounded soldiers left to die. His outrage led to the founding of the Red Cross and the principle of medical neutrality: that doctors and nurses should be protected, even in war.

But 165 years later, as humanitarian scholar Hugo Slim warns, we've slipped back into "pre-1859 barbarism with high-tech precision." Attacks on healthcare are not collateral damage—they are deliberate strategy. Analysts now call this 'Healthocide': the systematic destruction of healthcare as a weapon of war.

Figure 1: The Battle of Solferino, by Adolphe Yvon

Gaza: Medical Infrastructure Under Siege

Al-Shifa Hospital once served 700,000 people. Today it lies in ruins. Israeli forces raided the complex multiple times between November 2023 and May 2025, claiming it housed Hamas operations. WHO's analysis indicated repeated strikes on Al-Shifa consistent with systematic targeting rather than accidental damage.

WHO reports that only a fraction of Gaza's 36 hospitals remain partially functioning. Medical workers describe operating without anaesthetics, performing amputations by torchlight, and watching premature babies die when incubators lost power.

The human cost is not abstract for King's students. Dr. Maisara Alrayyes, a 2020 KCL graduate and Chevening Scholar, devoted his MSc in Women and Children's Health to protecting vulnerable populations in conflict zones. His research, published in the Journal of Prehospital and Disaster Medicine, focused on exactly these challenges.

Every university in Gaza has been destroyed, leaving 90,000 students without higher education. The academic infrastructure that might have trained Gaza's next generation of healthcare workers lies buried under what experts term the rubble of Healthocide.

Ukraine: Targeting the Vulnerable

According to the UN Human Rights Monitoring Mission, Russia has conducted over 1,700 verified attacks on Ukrainian healthcare facilities since February 2022. The pattern is chilling: maternity wards, children's hospitals, and ambulances struck repeatedly.

- March 9, 2022: Mariupol maternity hospital bombed, forcing pregnant women to flee down shattered staircases.
- July 8, 2024: Kyiv's Okhmatdyt Children's Hospital hit during surgery, staff carrying patients through smoke-filled corridors.
- July 11, 2025: Kharkiv maternity hospital struck, injuring mothers and newborns.

President Volodymyr Zelensky asked: "What kind of country bombs maternity wards?" Military analysts argue the answer is one that

recognizes how targeting the most vulnerable generates maximum psychological terror.

Syria: Perfecting the Kill Chain

Syria pioneered what humanitarian organizations describe as systematic targeting of medical care. The Assad regime's "double-tap" strikes: bomb a civilian area, wait for medics to arrive, then bomb the hospital receiving the wounded.

November 28, 2015, Al-Zafarana Hospital: A barrel bomb killed two and injured sixteen. Forty minutes later, three more bombs hit the hospital entrance. Seven medical workers died alongside their patients.

Physicians for Human Rights documented hundreds of such attacks. The tactic has since influenced military thinking in other conflicts, with similar patterns emerging from Gaza to Ukraine.

Figure 2: Middle East Eye: new study finds ambulances 'repeatedly targeted in Syria conflict

The Strategic Logic

Why target healthcare? Military strategists identify clear objectives:

Area denial: Cut medical services, and populations cannot sustain resistance long-term.

Psychological warfare: Killing healers spreads terror as communities lose faith that anyone will help.

Resource targeting: Hospitals consume electricity, fuel, and supplies that could support military resistance.

Intelligence gathering: Medical workers treating both fighters and civilians become potential sources of information about enemy movements.

Through "dual-use" justifications, military lawyers reclassify hospitals as legitimate targets and doctors as combatant supporters. Leaked Syrian government documents described hospitals as "terrorist infrastructure."

Digital Targeting: The Next Frontier

Ukraine has seen AI-enabled drones identify medical personnel by uniforms and equipment patterns. Military technology experts warn that facial recognition, smartphone GPS data, and social media analysis can now track healthcare workers with unprecedented precision.

GPS coordinates shared for protection under Geneva Conventions become targeting data. Social media posts by medical workers become intelligence assets for those seeking to eliminate healthcare capacity.

Figure 3: A Ukranian soldier launches an AI-equipped reconnaissance drone - an early sign of how digital targeting can be turned against healthcare workers in conflict zones

China's demonstrations of swarm drone technology suggest entire hospital networks could soon be disabled remotely, with individual medical workers tracked using the same smartphones they need for communication.

When International Aid Fails

Organizations like Médecins Sans Frontières operate with extraordinary courage but face structural limits. Medical facilities are repeatedly attacked despite clear markings and shared GPS coordinates.

Local doctors cannot be evacuated like international staff, making them both indispensable and highly vulnerable. As Hugo Slim notes, international agencies need government clearances that don't exist in war zones, while local healthcare workers shoulder the heaviest risks with fewest protections.

What Medical Students Must Do

For KCL students, this is not abstract. Dr. Alrayyes shows how King's graduates in health-related fields can find themselves working where healthcare is systematically targeted.

Tomorrow's doctors need preparation beyond NHS wards:

While studying:

- Advocate for conflict medicine education in the curriculum
- Learn digital security basics—your smartphone can become a targeting tool
- Support Physicians for Human Rights, which documents attacks and pushes for accountability
- Choose specialties strategically—trauma surgery, emergency medicine, and public health develop crucial skills
- After graduation, you'll face choices between safe domestic practice and dangerous international missions. Some will choose to work where healthcare is most needed and most threatened

A New Framework for Protection

Henry Dunant's outrage at Solferino created the Red Cross and Geneva Conventions. But those frameworks assumed wars between uniformed armies, not today's conflicts where civilian doctors are primary targets.

Humanitarian scholars argue for new solutions: blockchain-verified medical credentials that can't be manipulated, decentralized health networks resistant to targeting, and strengthened local healthcare capacity that survives systematic attacks.

Dunant didn't plan to revolutionize humanitarian law at Solferino—he simply saw suffering and chose to act. Today's Solferino is happening in Gaza, Ukraine, Syria and many other nations the Western Media doesn't have a stake in to cover.

Tomorrow's may be in the places you choose to serve. The white coat is no longer just a symbol of healing—it is a frontline uniform in the age of Healthocide.

The question is whether you'll be ready to wear it.

GKT Grads: One month down, many many more to go!

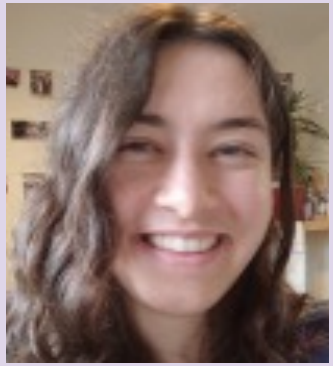
Dr Jade Bruce **FY1**

GKT graduates have now completed their first month as doctors! The long-awaited transition from medical student to doctor is monumental and a unique chapter at the very beginning of our professional lives. Naturally, starting work as a doctor is a time brimming with anticipation and excitement, but also challenges and unforeseen obstacles.

I've found taking responsibility for patients is, at once, the greatest reward and greatest challenge. You are no longer 'just the med student'... it often falls on your shoulders to figure out what to do, even if that does mean seeking help. There are days when you feel stretched in so many directions – you must learn to juggle, negotiate and prioritise a wide variety of demands, something I think you mostly learn experientially on the job.

That said, there is usually plenty of help at hand. Some help is more formal, the sort we practiced asking for in OSCE's using rehearsed SBARs to the Med Reg. However, I've been surprised to find that so much help is informal, asked to whichever member of the MDT happens to be around, often about logistical problems like who to call or which button to click!

I asked several of our GKT alumni to share their thoughts on the foundation programme so far, providing a valuable glimpse into their varied experiences working all over the UK as brilliant F1 doctors!



Dr Charlotte Mulcahy **FY1**

Where are you based?

A DGH in Paisley (of the shirt fame) which is a small town about 20 minutes from Glasgow.

What's your first job?

General Surgery, including colorectal, upper GI, same day surgery, pre-assessment, surgical admissions and urology! Plus covering the Medical Assessment Unit on nights!

How did you feel before your first day?

I attended shadowing religiously, so I was surprisingly not that nervous before my first day on the surgical receiving unit. However, I didn't expect that the new SHO and registrar would be on induction on the first day and I'd be alone on the ward. In hindsight, I'm glad I didn't know I would be alone as it meant I slept okay the night before.

What have you found most challenging so far?

The general logistics! There's so many tips and tricks to make your life easier that no one tells you about. I've gotten into the habit of calling anybody vaguely relevant to what I need and letting them signpost me — luckily everyone has been very friendly. One of the scariest moments was calling a peri-arrest... the patient turned out to be having a vaso-vagal. I found the embarrassment tougher to deal with than the actual situation but thankfully everyone was very understanding.

What have you enjoyed the most?

Seeing the patients! Initially, I found it annoying that nurses in Scotland aren't generally trained to take bloods. However, going round and doing bloods is often the highlight of my day as I get to really chat with the patients and sometimes their families. It feels great to properly know what's going on when you're on a ward and follow an entire patient journey, and being able to say goodbye and wish a patient well when they get discharged!

What is something that has surprised you?

The social aspect. There's about 15 of us on general surgery and we've bonded very quickly. We help each other out with tricky bloods or discharge letters. We always think about whoever is on nights/weekends and try to get as much done in advance so they can have an easier shift. I feel this sense of community between the FY1s, and also the SHOs and Registrars, is something I didn't realise was sorely lacking in the London hospitals!

Dr Sahil Mukherjee **FY1**

Where are you based?

Southwest London

What's your first job?

Neonatology

How did you feel before your first day?

Before starting, I was nervous. Medicine in UK has always had its reputation of being intense and at times overwhelming for foundation doctors. I only realised closer to the time that I would be solely working with neonates for 4 months, rather than general paeds... However, when I went, I was so happy to see such a caring compassionate team. The team culture is very supportive and encouraging.

What have you found most challenging ?

I've found it challenging to get out of my comfort zone and proactively ask for clinical opportunities. In a tertiary specialty, it can initially be quite hands-off for the foundation doctors, but the team is supportive to encourage our involvement. I have been fortunate to do a NIPE, give immunisations, and I intend to do more! I have found balancing my spiritual life challenging. Ultimately, that has been the core essence of my identity, so I strive for more balance. For academic and co-curricular opportunities, I have always been ambitious — I think I will and need to find more balance to prioritise my spiritual practice.

What have you enjoyed the most?

I have really enjoyed the charismatic nature of the neonatal team - they laugh, they smile! And the babies are so cute!

What is something that has surprised you?

I think I was taken aback by the kindness, based on so many stories I have heard and continued to hear about medicine, but I am grateful to Krsna to have been given a supportive team.

Where are you based?

The Royal Surrey County Hospital, Guildford, KSS West

What's your first job?

Upper GI Surgery

How did you feel before your first day?

Nervous! Luckily, we'd had a couple of days shadowing prior to starting, which helped so much! It feels really scary that suddenly you're the doctor and have all these jobs to do and people turn to you for their questions.

What have you found most challenging ?

Being asked questions that you actually have no clue about! Particularly for surgery, and a sub-surgical speciality I did not have any exposure to at medical school, it can be challenging trying to give advice. However, most people don't mind you saying, 'I actually don't know' and that you are going to check with your reg.

What have you enjoyed the most?

Being able to put what I learned at medical school into practice to actually help patients. Also, being part of a team in which all members play a key role.

What is something that has surprised you?

Most people at my hospital are so lovely and helpful. They know we've just started and are happy to help you out, even if you think you are asking a really silly question!

Dr Bethany Gabriel **FY1**

Dr Rosy Jones **FY1**

Where are you based?

West Yorkshire, Leeds, Huddersfield Royal Infirmary

What's your first job?

General Surgery, Colorectal

How did you feel before your first day?

Excited and cinematic, was channelling greys anatomy in a big way but also feeling very unsure about how I'd manage actually doing the job.

What have you found most challenging so far?

Managing sick patients on my own when seniors have been tied up in theatre. I didn't realise how look it would take for a senior to arrive and navigating that uncertainty has been a challenge.

What have you enjoyed the most?

The patient interactions and feeling part of a team. Actually being useful and doctoring about to help patients get better, very cool feeling.

What is something that has surprised you?

How unbelievably friendly the hospital community is and how no one really knows what they're doing!

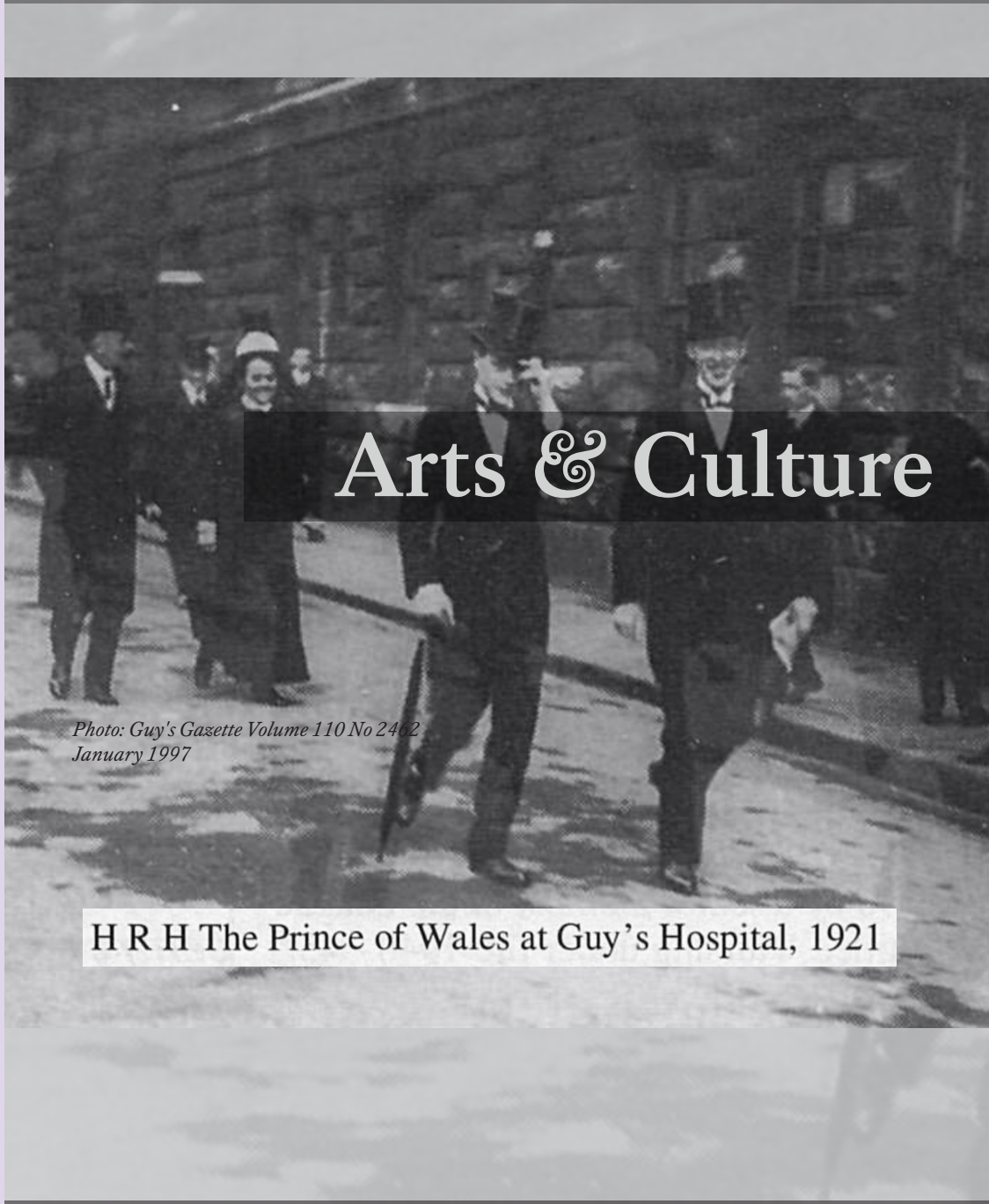


Photo: Guy's Gazette Volume 110 No 2462 January 1997

ARTS & CULTURE

Introducing... The Gazette Committee's Summer Favourites!

Noor Amir Khan **MBBS4**

Amongst spontaneous adventures and lazy afternoons, the art we discover, rabbit-holes we pursue and hobbies we entertain paint a sand-battered map of the passing summer. Yet, we often carry parts of the media we consume into friendships, conversations and memories that linger beyond the end of the season.

With that in mind, we hope you enjoy our Gazette Committee's multimedia recommendations; whether a book, film, painting or musical, these are our favourite works from Summer '25.

Joshua Fakulujo: ***Dopamine Nation (Book)***

Arts & Culture Deputy Editor

Hey! I'm Joshua and this summer I found myself captivated by the book 'Dopamine Nation' by Dr. Anna Lembke. I initially chose it because I'd become fascinated by the way that scrolling – on everything from Instagram to LinkedIn – could be changing the way that I saw the world. I already had quite a few books on my 'to-read' list though, so the novel did nothing but look pretty (I love the front cover) until I picked it up again this summer. I'm so glad that I did.

Psychiatrist and author Dr. Lembke describes her own experiences and her patients' as she writes about addictions to various high-dopamine behaviours. Describing smartphones as "digital drugs," I could never have expected the range of addictions that she covered. For example, after a patient had discovered that the pain of cold showers could lead to a pleasure that overshadowed his previous drug addiction, he describes his near-freezing ice baths and a brand new ice-cold mattress. As he continues, he realises that he had become addicted again – to pain. In the battle to find balance, Dopamine Nation ultimately suggests that we stop seeking escape from the world. Instead, why don't we immerse ourselves in it?

Tresa Martin: ***Bridget Jones (Film)***

Science & Research Deputy Editor

On a plane this summer, I found myself scrolling through the in-flight entertainment to find something to watch - and I stumbled across the 'Bridget Jones' universe. Why not? I'll see if I like it and, if not, I'll watch something else.

7 hours and 17 minutes later... I'd completed all four films and, unfortunately, had the tired eyes to show for it.

The first film hit home the hardest for me: not only do I find out that Bridget Jones owns her own flat, pretty much right next to Guy's Campus, but that she has a job too - so relatable. Seriously though, I found it incredible that, whilst I considered the character of Bridget Jones a successful woman, she obviously thought of herself less kindly - and this made me realise that we often don't see the better parts of ourselves.

Bridget might be happier when she finally ends up with Mark Darcy, after a huge Pride and Prejudice style misunderstanding, but the happy ending is really that Bridget finally realises her self-worth, which contributes to her newfound confidence.

I loved watching the rest of Bridget's shenanigans and would definitely recommend it to anyone wanting a laugh!

Nana Ossei: ***Flowers for Algernon (Book)***

Science & Research Deputy Editor

An avid reader friend of mine (who I regularly discuss books and share reflections with) recommended 'Flowers for Algernon'. He promised it would challenge me both ethically and emotionally - he was right.

The book is written from the first-person perspective of a man with an intellectual disability through his daily progress reports. He undergoes an experimental treatment that gives him superhuman intelligence. His new awakening allows him to understand his past life and how he was treated by those he once considered friends. This novel awareness causes him to change and struggle to connect with people he used to be close to, with the book poignantly capturing his complex emotional and mental state.

The book serves as a powerful critique of how society treats people with intellectual disabilities, taking us through the dehumanising and cruel treatment he experiences from both his former and super-intelligent selves. It made me reflect deeply on how I relate to everyone, not just the intellectually disabled. Most people will never truly know me as a person, only the image I project in a brief encounter. The book challenged me to consider whether my good intentions always come across in those fleeting moments. It's a very powerful book and something that should be on everyone's life curriculum, as it underscores the immense power our actions can have on another person's life, even in the briefest of interactions.

Ruby Ramsay: ***The Melt (Painting)***

News & Opinion Section Lead

Cold yet warming. Barren yet animated. 'The Melt', by Anthony Garret, captures the complexity of emotion that the Arctic exudes - the tumult and the calm.

This piece is styled on footage from a 19th-century expedition on one side whilst, on the other, it depicts an iceberg seen during a recent circumnavigation attempt by @ellaintheartic.

It is painted on recycled yacht sails using a dichrome of white and blue, and now floats on a lake in North Wales, reflecting icebergs down onto the water below.

The juxtaposition between the whites and blues of the work and the verdant surroundings signalled to me the sheer contrast of nature. This work is unmissable and almost jarring against the otherwise untouched lake; as a viewer, you cannot avoid being confronted and slowed by it.

Whilst the rough edges of the great icebergs are unmistakable in the painting, it is the softness of it that strikes me - along with the wonder. The soft colours that form the icebergs slowly moving across a still lake imbue the work with calm.

To me, this represents nature, stillness, and peace - qualities that are rare, yet increasingly precious. Here, they are captured perfectly.

Naim Ghantous: ***If Beale Street Could Talk (Book)***

Co-deputy Editor in-chief

'If Beale Street Could Talk' by James Baldwin embodies the pain, passion and nuance of human relationships against the seemingly inexorable wrath of social injustice. In short, the premise

centres around a woman whose fiancé is wrongfully arrested for a crime he did not commit, and the cascading effects on their already struggling families in 1970s Harlem. The way this book manages to capture complex, oftentimes fractured, family dynamics on a foundation of such beautiful prose is remarkable - I think. New York serves as this moon drunk monster, an unpredictable beast that thrashes at our characters whilst their love for one another drives them to pick up the broken pieces of this untimely severed relationship. Love is everywhere in this novel, scattered not only throughout vivid recollections of how our two main characters came to meet and grow, but in every fibre of its dialogue, setting and overarching themes. The cathartic interplay of love, desperation and hope is something Baldwin excels in (having read much of his work this summer), but 'If Beale Street Could Talk' left me aching at both the beauty and the brutality of life and of loving. Give it a read!

☆ ☆ ☆ ☆ ☆

Milad Qadare: ***Line of Duty (TV Show)***

News & Opinion Deputy Editor

This summer I started watching 'Line of Duty' – a British police drama about anti-corruption investigations. What first caught my attention was how well-written and intense every episode feels. Unlike other police dramas, 'Line of Duty' doesn't give you an easy sense of right or wrong. The blurred lines between corrupt officers, undercover work, and personal loyalties make it both gripping and unsettling.

Watching it has been an emotional rollercoaster: at times frustrating when characters I trusted turn out to be compromised, and at others exhilarating when AC-12 closes in on corruption. One of the most striking elements is the interrogation scenes: long, dialogue-heavy, and filled with tension - which showed me how powerful words alone can be in creating suspense.

What struck me most is the theme of institutional trust. As a medical student training in another public institution, the idea that a system designed to protect people can also fail them resonated strongly. It's made me think more critically about accountability and integrity in professional life.

I'd recommend this to anyone who enjoys shows that keep you guessing while raising bigger questions about power and truth. If I could ask the creator (Jed Mercurio) one thing, it would be: how much of it draws from real-life cases?

☆ ☆ ☆ ☆ ☆

Zainab Abdur Rahman: ***Honor by Thrity Umrigar (Book)***

Illustrator & Deputy Editor

Set in India (both the city and rural villages) and exploring the harsh reality of honour killings, caste discrimination, and misogyny, the story caught my attention as I was looking for a book that explored my own culture.

It follows the story of an Indian American journalist who returns to India after a long time; she covers the story of a Hindu woman, Meena, who is brutally attacked by her own family after marrying a Muslim man. Exploring these themes in such an open and unflinching manner made this a difficult read at times and reading about Meena's story and how violently she was treated by her own family was intensified by the painful knowledge that her story echoes real life incidents. As well as religion and culture, it also commented on principles of journalism and how important it is to recognise these horrors and yet not reduce the identity of a whole country to the brutality that may occur there. Although, at times I found the writing slow and the ending somewhat rushed and out of place, overall, it was a layered and complex read. It makes you reflect on tragedies and horrors that still exist yet, gratefully, most of us are shielded from. Privilege was a significant theme throughout and emphasised that, what may be someone's everyday struggle, might not even be a distant thought to another.

☆ ☆ ☆ ☆

Zaynah Khan: ***Maps of Our Spectacular Bodies (Book)***

Arts & Culture Section Lead

Undulating lines - the pattern of a fingerprint. Or a tree? Or was it a 'map', as the title would suggest? All I knew was that I was accelerating towards the book, despite my self-imposed book-buying ban. How could I refuse such an enthralling cover?

Unlike my lack of self-control, this book was not disappointing. The novel explores the relationships of our protagonist, Lia, with her family, her work as a creative, and her health as she receives a cancer diagnosis. It flits through the memories and experiences of Lia's childhood and first love, too.

Interestingly, the narrator is disembodied and changes between characters - but also objects (e.g. IV drip) and abstract concepts too (e.g. a wish). Lia's creative work with words seeps into the pages through witty definitions related to the plot or through poetic and fragmented thoughts and feelings sprawled anachronistically across pages.

Honestly, I'm astounded by Maddie Mortimer for such an experimental debut novel - and at only 24 or so! I finished reading this feeling a creative zeal being sparked, which is the best possible outcome of consuming media. Would highly recommend!

☆ ☆ ☆ ☆ ☆

Ananyaa Gupta: ***Charité Berlin Visit***

Science & Research Deputy Editor

During a global health networking trip over the summer in Berlin, I had the chance to visit the dissection rooms at the famous Charité Berlin University and hospital.

We were shown neatly arranged rooms of metal cabinets not too dissimilar to the ones at KCL, but what really caught my attention was what we saw next. They have made plastinated models of the entire human anatomy, in extreme detail. Not for show, but to teach anatomy to students who cannot dissect due to health reasons (mainly pregnant students). Although a seemingly simple measure, this earned them the Family Award. It particularly struck me because, without it, many students would not be able to fulfil the requirements of their degree. I felt it was a wonderful way to innovate in teaching that is both world-class and inclusive. It was a reminder that diversity and inclusion in medicine is far broader than we realise or is commonly discussed. A sense of pride for those who completed their studies in this way washed over me: if they were not given this opportunity many dreams and plans may have been disrupted - and many are in places that do not have these accommodations. Whilst many schools offer prosection, I learned that the formaldehyde can be troublesome for some.

This was an excellent demonstration of preparing our future doctors to prioritise others by creating the best possible learning environments, without making them feel disadvantaged or singled out.

☆ ☆ ☆ ☆ ☆

Jing Yuan Chan: ***Crime and Punishment (Book)***

Dental Corner Section Lead

This summer I made my way through Dostoevsky's 'Crime and Punishment', and by the end felt both suffocated and oddly energised - although, to be fair, my pastime over the last few months was studying oral medicine, so perhaps I've grown accustomed to claustrophobic thinking.

What struck me most was how quickly I was drawn into Raskolnikov's overactive conscience and became trapped in his oscillations between rational detachment and feverish guilt. Unlike the common man archetype we encounter elsewhere, he sees himself as an "extraordinary man" exempt from ordinary morality and permitted to overstep the law if it serves what he deems a higher purpose. Despite being a work from the 19th century, this premise still feels uncomfort-

ably familiar today, when leaders still claim exemption from the rules that bind everyone else. Dostoevsky reveals the danger of this mindset not through abstract concepts, but through the messy and inevitable unravelling of one student's life, which made it more tangible and easier for me to grasp. A line that stuck with me was: "It takes something more than intelligence to act intelligently" (Pevear and Volokhonsky translation).

To me, Dostoevsky is suggesting that true redemption begins when we acknowledge our reliance on others because, when left completely to our own devices, we risk spiralling into a self-inflicted battle as our thoughts turn against us. At the end of the day, the way forward often relies less on genius alone and more on allowing others in to steady us along the journey.

Morgan Bailey: ***The Perfect Cake (Musical)***

Editor in-chief

To kick-start my Summer, I was assistant musical director on an original musical called 'The Perfect Cake' at UCL. A camp, steampunk musical about a baking rivalry, the music was Danny Elfman-esque and extremely fun to play. I spent some months as the rehearsal pianist (helping the singers learn their songs) and playing their accompaniment. During the performance I was the 1st keyboard in the band, using both harpsichord and E.P sounds. This was the 5th musical I had been involved in as a pianist but the first as keys 1.

Musical theatre is unique. You tend to be given around 100 to 200 pages of music per musical, particularly for the piano part. This can be larger in volume than many classical pianists learnt repertoires! This means memorising the music is not a viable option. Something called 'sight reading' becomes your best friend. Sight reading is a unique skill whereby one can read a sheet of music and play simultaneously, similar to reading and reciting the words to a book out loud. For me it is a skill that took years of practice to hone, and I still have a long way to go.

Sammer Atta: ***The Devil You Know: Encounters in Forensic Psychiatry (Book)***

Science & Research Section Lead

Following my forensic Psychiatry placement at the Bethlem Royal Hospital in 4th year, I was left with a mixture of emotions and questions about the field. Spending 4 weeks at this placement was a unique experience which left its mark on me - and so as I walked through the library one day, the book's title immediately stood out to me. I was eager to gain insight into the thoughts of an expert in the field and to see whether my experience was truly "unique" or part of the reality of this specialty.

A key takeaway from the book...

Hurt people hurt people. Humans are shaped profoundly by their experiences and past. A core principle underlined throughout the book is that nobody is born "evil" - people and, consequently, their actions are products of their circumstance, including social inequality, stigma, and the aftermath of events such as trauma and war. While those at the fringes of society may at first appear "closed off," it is often through time, patience, and a willingness to understand their story that meaningful connections can be built, allowing them to be open about their struggles.

Christine Yue: ***Superman (Film)***

Designer, Social Media Lead & Events

As a fan of superhero movies, I watched 'Superman' not really expecting much - but ended up finding it really enjoyable. This film was bright and hopeful, staying more true to Superman's original character compared to the darker previous versions. The film was exciting and had good bits of comedy and romance. What made it stand out was how bold the writers were with the messaging, clearly referencing current real world issues, and showing Superman as a beacon of hope and ally to the oppressed.

In a world where companies rapidly pump out shallow CGI-slop superhero movies for profit, this movie was refreshing to see and felt genuine. It even started a meme online of people using the movie's sound track and promoting kindness, quoting Superman's phrase, "Kindness is the new punk rock". The movie's infectious positive energy made you feel good and want to do good. While this movie wasn't perfect in any sense, I feel it was a step in the right direction for superhero movies moving forward and was lots of fun to watch!

Victoria Chu: ***Remarkably Bright Creatures (Book)***

Arts & Culture Deputy Editor

I came across this book whilst browsing on BookTube for inspiration for some summer reading. Not thinking much of it, I delved into a curious world narrated by a witty anthropomorphic octopus, couldn't put the book down and even found myself shedding tears at the end.

Without giving too much away, the story follows Tova, a seventy-year-old widow who forms an unlikely bond with Marcellus, the giant Pacific octopus at the aquarium where she works. Tova is still haunted by the mysterious disappearance of her son three decades earlier, and, through his interventions, Marcellus helps her piece together the truth. As strange as the plot sounds, the story is charmingly touching. Shelby Van Pelt balances humour with poignancy, exploring themes of grief, change and acceptance. It is both whimsical and heartfelt, with moments of sharp insight nestled among tender storytelling. All in all, a perfect summer read I'd recommend for anyone wanting a heart-warming literary fiction with a mystery and feel-good ending. I'll leave you with the line that gives the book its title: "Humans. For the most part, you are dull and blundering. But occasionally, you can be remarkably bright creatures."

Noor Amir Khan: ***Dandelion Wine (Book)***

Co-deputy Editor in-chief

This book, if anything, is Ray Bradbury's exploration of a summer beyond time. He wrote it over 10 years after discovering a word-association process for his writing: waking up in the morning, spilling the first words from his mind onto paper and constructing characters and stories from them. As the process progressed, it became a gateway to his childhood - a means to interact with his memories, find closure in changing friendships and the passing away of loved ones.

This book sits on the precipice of a particularly fragile point - when the thoughts, dreams and wonders of youth intersect with the twinging self-awareness and vulnerability of growing up. Under the guise of eccentric characters, time- and happiness-machines and a Ticonderoga pencil, Bradbury confronts timeless questions. I was particularly struck by his exploration of relationships between the old and young in this book, often finding that those at the extremes of age are presented with the most depth, richness and connection.

By the time I reached the last few pages, the summer of Green Town (Bradbury's fictional playground for the novel) had aged - and mine had too.

As Autumn now begins to peak through, maybe a part of you isn't ready for the seasons to change, time to pass by or a new academic year to begin. If so, maybe picking up this book will let you revel in the waning sun for just a little longer.

Bridging the Thames: A Walk Through London's Iconic Crossings

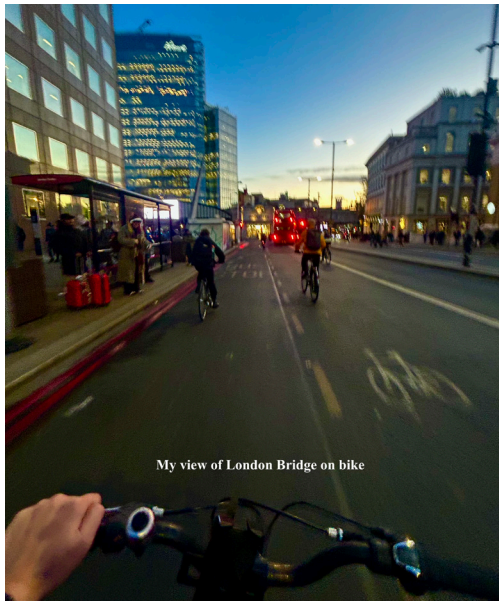
Victoria Chu **MBBS3**

London Bridge, the world-renowned construction which sits neatly next to our campus, often leaves first-time visitors disappointed and underwhelmed. Many tourists mistake Tower Bridge or even Westminster Bridge for it, largely because of the stark contrast in grandeur. Why does a London Bridge, so iconic that it inspired a nursery rhyme, appear so unassuming compared to its counterparts? To find out, we need to step back into history...

London Bridge was so called due to it being the first ever bridge in London or Londinium, as it was known when the Romans constructed it in 43 AD. The pivotal construction allowed the Romans to take advantage of the Thames and the land around, kickstarting Londinium into a hub for business and trade. As centuries passed, the wooden crossing would be destroyed, rebuilt and relocated many times. The early 13th century saw the first substantial iteration of the bridge in stone form. In typical London fashion, Medieval England capitalised on the city's only practical Thames crossing by building shops, houses, even a chapel onto it- transforming the crossing into a high street.

For many centuries to follow, London Bridge retained its standing as the sole bridge of London, keeping true to its moniker. The bridge was run by Bridge House Estates, on behalf of the City of London Corporation, which charged toll fees to keep congestion under control. The majority of Londoners, in fact, rarely utilised the crowded bridge, preferring instead to cross the river via wherries: long, sharp-ended rowboats. The original Uber boats! It wasn't until the 18th century that the Westminster and Blackfriars Bridges were built, finally providing Londoners with options to traverse the Thames.

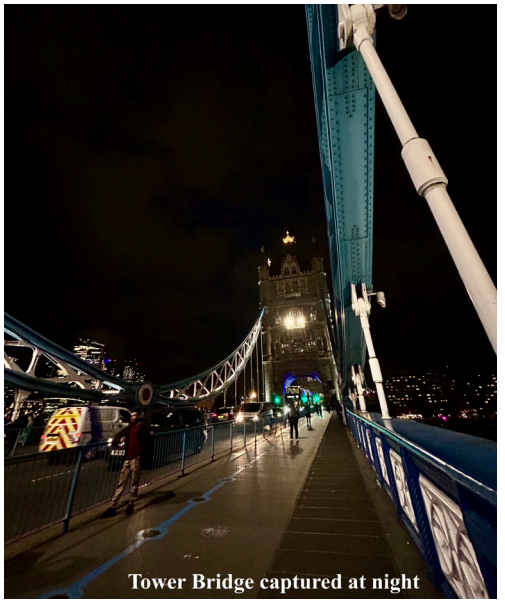
By the 1960s, as cars increasingly took over the city, London Bridge needed to be widened to cope with the surge in traffic. To fund the project, the City of London Corporation auctioned off the existing bridge to the highest bidder, American entrepreneur, Robert P. McCulloch. It was dismantled brick by brick and shipped to Lake Havasu City in Arizona, where a reconstruction of it stands today. The replacement bridge, completed in 1973, reflected the architectural mood of the era, adopting the stark, concrete modernist style associated with Brutalism, giving it the appearance we see today.



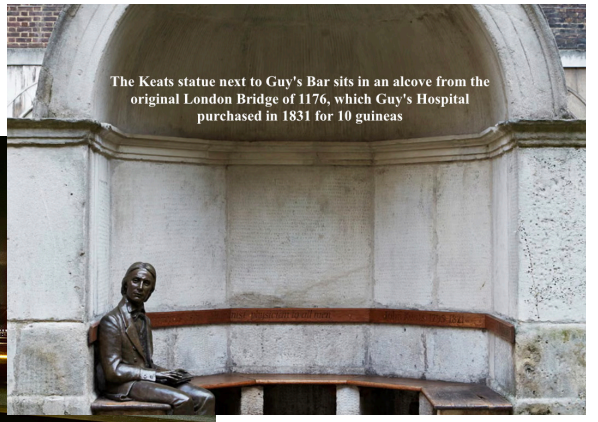
My view of London Bridge on bike

Tower Bridge, opened in 1894, is a striking contrast to its more utilitarian counterpart. As London expanded, a new crossing was needed east of London Bridge, but it had to accommodate both the flow of road traffic and the tall-masted ships serving the busy docks. The ingenious solution, designed by Sir Horace Jones, remains to this day the only bridge east of London Bridge in Greater London. So named as a nod to its neighbour, the Tower of London, the bridge has since been symbolic of the capital, especially with its ingenious bascule mechanism that provides a visual spectacle every time the bridge opens up to allow ships to pass. Its dramatic lifting mechanism remains a marvel even today, and for those eager to witness it, Tower Bridge publishes scheduled lift times on its official website.

A city at the very heart of culture and commerce, London is stitched together by the bridges that carry its people across the Thames. From medieval stone to Victorian ingenuity and striking modern design, the bridges tell the story of a city that has always looked both backwards with reverence and forwards with ambition. Living in London for my third year now, being encapsulated by the impressive skyline never gets old. Beholding St Paul's, Big Ben, Westminster Abbey, and many more landmarks, while standing on bridges that have borne witness to generations before—it's a true pinch-me moment. To live and move through this city is to walk amidst its history, feeling the weight and wonder with every step across the Thames.



Tower Bridge captured at night



The Keats statue next to Guy's Bar sits in an alcove from the original London Bridge of 1176, which Guy's Hospital purchased in 1831 for 10 guineas

Waterloo Bridge captured at night

KEATS' CORNER

On being a Work in Progress

Joshua Fakulujo **MBBS2**

Expectations can often feel as heavy
As the textbooks we were so eager to buy;
We focus so much on what it could mean to fly
That we forget we have to walk first.

So, between anatomy and physiology,
I hope there's time to find the meaning in medicine;
And amidst the complexity of biochemistry,
I hope you can appreciate the beauty
In how far you have come.

There will be days when failure
Feels like a mountain we could never climb,
And moments where it feels easier to avoid it.
But on days like these, we remember:
Sometimes it takes almost drowning to learn how to swim,
Stumbling to learn how to run,
Losing, to discover what it might take to win.

There will be days when it feels like
Our future profession requires perfection.
When we tremble with a scalpel, for fear
That a poor dissection could devastate
A dream to serve as a surgeon.
But on days like these, we remember:
King's was not built in a day
And neither will we be.

Instead, we must revere our mistakes like royalty,
And treasure our errors with empathy.
When imposter syndrome pushes us to admit defeat,
We whisper back: This is all part of the journey.

So when opportunities come,
Take every moment to learn and to decompress,
For there will never be a better time to grow
And after all, we are still works in progress.

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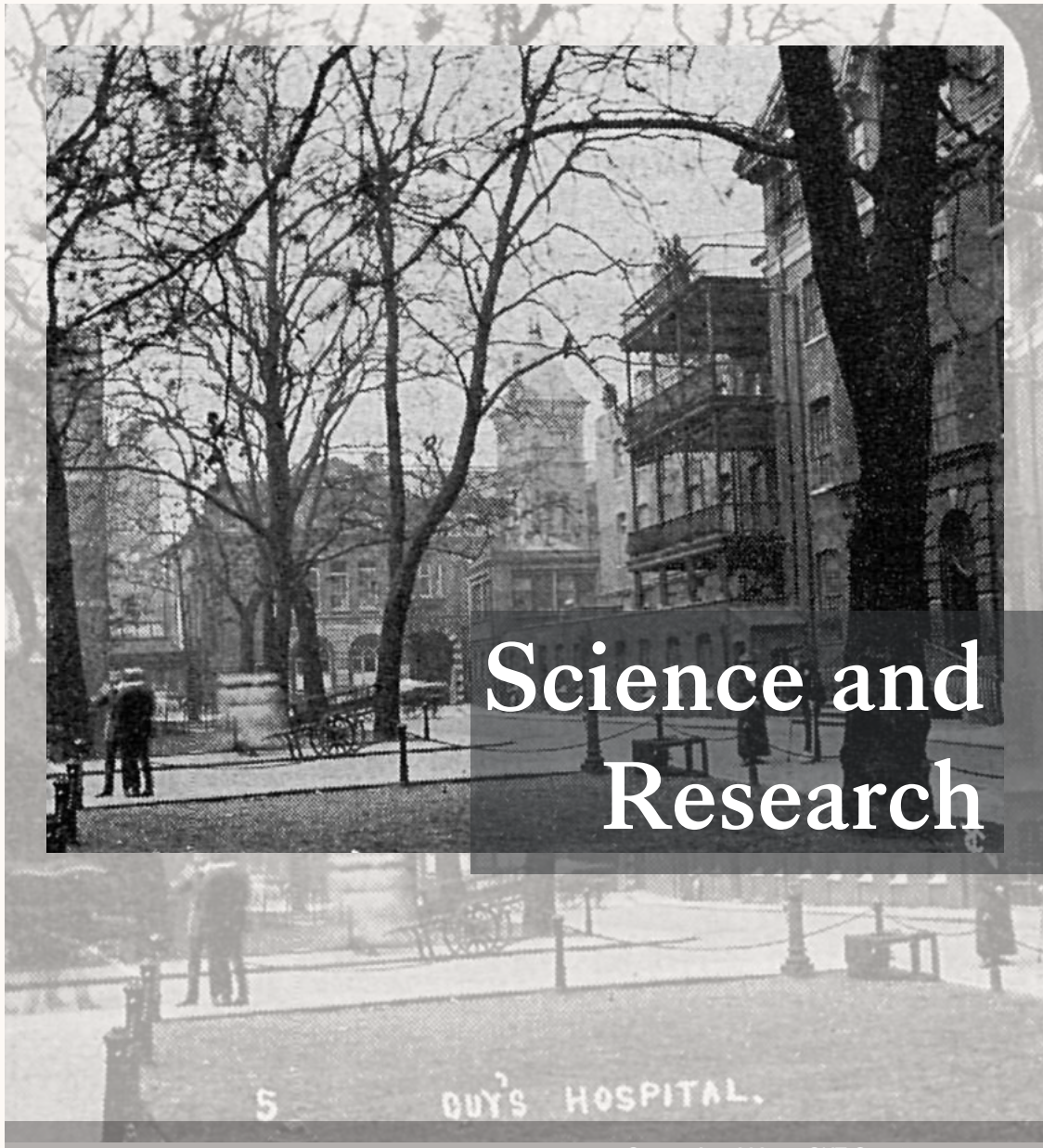

Science and Research

Hard to Digest: Why Colorectal Cancer Rates are Rising in Young People

Deniz Suer **MBBS5**

Sam Carter, *The Fast Supper*, 2004. This painting parodies Leonardo da Vinci's *The Last Supper*, representing Ronald McDonald as Jesus, and other fast food mascots as the Twelve Apostles. "To me this has nothing to do with Christianity, it's more about the Religion of Fast Food. I felt that these commercial icons were my disciples."

Walk into any food court today and you are likely to encounter the same names over and over: McDonald's, KFC, Subway, Burger King, Five Guys... overwhelmingly the majority of these restaurants serve food that is quick, cheap, and all too easy to indulge in. With the pace of life seeming as though it is constantly accelerating, such brands have become staples in modern society, albeit at the cost of our health. In recent decades, the global incidence of colorectal cancer (CRC) in people under the age of 50 years has been increasing so rapidly that CRC in this age group has become a distinct entity referred to as Early-Onset CRC (EOCRC).

This is only part of a wider trend where the number of cancer cases are growing worldwide, attributable to aging populations and environmental factors In England, 6.3 million new cancer cases are expected by 2040, up from 5.5 million cases in the last 15 years, representing a significant burden on the NHS unless measures are taken to prevent and diagnose cancer earlier5. Notably, EOCRC, already the leading cause of cancer-related deaths globally in men under 50, is predicted to surpass female breast cancer as the primary cause in women under 50 too, by 2030. Young people in particular face unique issues in the context of cancer, including cancer treatment-related infertility and psychosocial hardships.

Numerous factors can be attributed to the growing prevalence of EOCRC. Of the cases that are inherited, more than half are related to Lynch syndrome, and the second most common condition is familial adenomatous polyposis syndrome, followed by rarer diseases. However, as the incidence of inherited germline pathogenic variants is not increasing among the general population (only when comparing the incidence of EOCRC to LOCRC), the major culprits are likely to be sporadic factors2. These include diet, obesity, smoking, and alcohol.

Obesity is intricately linked to carcinogenesis, including EOCRC, via multiple mechanisms. There is 'an established association between inflammation and cancer, and the expansion of adipose tissue fosters a state of 'chronic low-grade inflammation'. Now recognised as a dynamic endocrine organ, adipose tissue is known to secrete proinflammatory cytokines. Various other processes also play a role. Furthermore, obesity reduces the effectiveness of different cancer therapies, including radiotherapy, chemotherapy, and surgery, and tends to result in a poorer prognosis, as patients with higher BMIs are more likely to have a more advanced stage of cancer.

If obesity therefore creates a carcinogenic environment in which EOCRC can develop, what creates an obesogenic one? In other words, how did we get here in the first place?

Food has always meant more than the molecules it is made of. From religious symbols like the forbidden fruit, to national symbols like the Big Mac, food functions as a medium for 'cultural narratives'. The social and ethnic connotations of the concept of cuisine mean that we 'develop a taste for some foreign food', revealing 'how closely tied edibility is to cultural perception.' Polish-American scholar Alfred Korzybski remarked that "people don't just eat food, but also words", just as when we hear the word *pizza*, we might think of Italians. Is it any coincidence therefore that 'tongue' shares the same word with 'language' in some languages, and is also involved in the process of eating?

By examining the semiotics of food in this way, we can begin to interpret food as a reflection of the culture in which it is found. The Frankfurt School scholars of the 1920s saw the commodification of everything, from art to food, as stemming from capitalism, where everything is ready to be sold and discarded quickly. With the emergence of a consumerist society, in which 'amusement, quickness, and facility became paramount at the threshold of the twentieth century', a 'fast' food culture, often overlapping with 'junk' food, burgeoned, embodying 'Americanisation, industrialisation, and globalisation'. From the sandwich to canned soup, cupcakes, and doughnuts, food has become increasingly standardised and efficient, much like other areas of life (including education and media) subject to 'McDonaldization', a process defined by sociologist George Ritzer whereby "the principles of the fast-food restaurant are coming to dominate more and more sectors of recent ideas about the worldwide homogenization of cultures due to globalization". The rising incidence of EOCRC is therefore thought to be connected to the global spread of the Western diet, characterised by (ultra)processed and refined foods with added sugars, salt, and saturated fats.

Eager to boost sales, US food companies spend $14 billion per year to advertise in all media, with over 80% of these expenditures promoting fast food. Studies have shown a causal link between exposure to content featuring junk food on social media – such as 'mukbangs' (videos of people eating large quantities of, often unhealthy, food), eating challenges, and posts from restaurant brands or content creators reviewing restaurants – and food-related behaviours, including choices and consumption. It is therefore important to address measures to counter unhealthy food marketing.

Policymakers are slowly catching up with food companies by introducing advertising restrictions for less healthy food or drink on television and online as per the amendment to the Communications Act 2003, which will come into formal effect from 5 January 2026. Public health campaigns using social media could help to 'countermarket' food companies and raise awareness of EOCRC.

Management guidelines for EOCRC developed by a multidisciplinary international group (DIRECt) report that, unlike for LOCRC, germline multigene panel testing is always recommended, a family history is mandatory, and all patients should receive information on fertility preservation options26. Further investigation is required to assess the outcomes of screening in young populations at average and increased risk for CRC, in keeping with prioritising early detection.

While systemic change is what will address the billions spent on making fast food more accessible, we can take immediate steps to curb the harmful effects of obesity, such as adopting a healthier diet rich in fibre and being more physically active. By making healthier choices, we can help to create a society based not on a "process of satisfying [consumer] wants that create the wants" but one that is more sustainable, so that just as culture changes our food tastes, an improvement in our food tastes can shape our culture and lives for the better.

References available on request at gktgazette@kcl.ac.uk

Spontaneous Human Combustion

Sammer Atta **MBBS5**

SCIENCE AND RESEARCH

The notion of a sudden death is something which medics are very familiar with: cardiac abnormalities, strokes and seizures being the most common aetiologies. Yet one of the stranger phenomena that has attracted the attention of medics and non-medics alike is that of "Spontaneous Human Combustion" (SHC). While certainly something that is not covered in our MBBS curriculum, its discussion underlines the key principle of establishing a cause of death, even in the most extra-ordinary of circumstances.

So what exactly is SHC? The pseudoscientific explanation is the "spontaneous combustion of a living human body without an external cause". Thus the bizarre image of one bursting into flames springs to mind. Photographs show a pile of ash – with a lone hand or leg and importantly, their surroundings unaffected. It is not surprising that Victorian society viewed this as a divine intervention – a punishment from the heavens, and in the 1970s it was even speculated that negative emotions played a role in this self-inflammatory process.

In fact, a modern case of supposed SHC occurred in 2010, when a 76-year-old man was found burned to death in his home in Ballybane, Galway. Investigators found no evidence of accelerants or that the nearby open fireplace had caused the fire. The severity of the burns meant that no precise explanation could be reached, and at the inquest, the coroner concluded that the death fitted into the category of SHC, echoing past descriptions of similar incidents. However, the verdict did stir debate, with some questioning whether other possible causes had been too quickly dismissed.

While the human body contains enough stored fat to fully combust itself – even in the leanest of individuals, it is composed of 60-70% water, and there is simply no mechanism by which it would be able to spontaneously burn. This is not to discredit the cases from occurring at all – but rather to point towards an external cause of combustion. As mentioned by Benjamin Radford in his article in the Live Science magazine, "If people truly could suddenly burst into flames without being anywhere near an open flame, presumably there would be examples that have occurred while the victim was swimming, in a bathtub, or even scuba diving. Yet those cases do not exist."

So how do those grizzly photographs come about? It sounds impossible for someone to be reduced to ash in such a way – such a strong fire must be required to break down bones, and yet the surroundings remain intact? Luckily the scientific community formulated an explanation. The "wick effect hypothesis" involves an external source of heat such as a cigarette, coming in contact with the skin and exposing subcutaneous fat. A burning item of clothing acts as a "wick" while the fat acts as the "wax" of a candle resulting in a vicious process of self destruction. This was successfully tested with pig tissue and successfully correlates with the evidence recovered from cases of SHC. In another study, osteoporotic bone "consistently displayed more discoloration and a greater degree of fragmentation than healthy ones." The explanation for in-tact surroundings can be explained by fire's tendancy of spreading upwards, with lateral spread of flames being much less likely, especially in the absence of nearby flammable materials.

Thus, this short article brings to light an important discussion regarding cause of death. Advances in medicine have meant that there is a significant reduction in supernatural belief towards cause of death and can finally allow those who are unlucky enough to be victims to rest in peace. Not being able to establish a cause of death may result in theories and conspiracies regarding ones passing, especially in those of sudden aetiology. Social media can be saturated with ideas and thoughts from the general public pondering upon cause of death: "It was the COVID vaccine!" "It the food they were eating". It is no surprise that such thoughts and questions may arise, but it is our role as healthcare professionals to answer them.

Large Language Models: The Next Frontier in Healthcare Innovation

Nana Ossei **MBBS5**

Do you remember what you were doing on November 30th, 2022? For most it was just another day at work or school, but for millions, it marked the release of a new technological tool that would soon make waves across industries. This tool, ChatGPT, amassed 1 million active users in just five days. By May 2025, that number had skyrocketed to 800 million with room to most definitely grow. Since its launch, we've witnessed its transformative effect on sectors like computer science and finance. With the emergence of competitors like Meta's Llama and Google's Gemini, AI has become an all but inescapable buzzword, but a key question remains: what exactly is this technology and how will it specifically reshape healthcare?

The technology behind ChatGPT is part of a broader category known as Large Language Models (LLMs). To understand what LLMs are, we first need to break down some key concepts. The UK's Information of Commissioner's Office (ICO) defines AI as 'algorithm-based technologies that solve complex tasks by carrying out functions that previously required human thinking'. Within this we have machine learning (ML), a field of AI which allows computer programs to learn from data without being given explicit instructions. A more advanced form of ML is Deep Learning where computer programs use neural networks (an architecture developed to mimic human thinking) to analyse complex data.

This brings us to LLMs which are a type of AI model using deep learning trained on vast amounts of data. By using deep neural networks, LLMs identify intricate patterns and relationships within the data, enabling them to predict the next word in a sequence. This predictive ability is what allows them to produce coherent and contextually relevant text in response to a wide range of prompts, from answering questions to generating creative content.

Imagine a medical student reading millions of case studies, textbooks and exam questions. Over time they'd begin to internalise not just facts, but the structure of reasoning behind answers. LLMs function in a similar way - not because they truly understand in a human sense, but because they've been trained on enough data to mimic reasoning patterns with impressive accuracy.

In general, the larger the dataset used to train an LLM, the better it performs; however this isn't always true. It's the quality of these datasets that matter. LLM's can be trained on diverse datasets like the public internet, digital books, code repositories and specialised datasets from Common Crawl. For example, the dataset used to train GPT-3.5 was estimated to be 45TB (45,000GB). This is the foundational training data, but models can be further enhanced through a process known as fine-tuning.

Fine-tuning involves taking a pre-trained model and training it on a more specialised dataset. In healthcare, this could mean further training on medical literature, anonymised patient records and clinical guidelines. Fine-tuning refines the model's knowledge, bettering its ability to generate precise and reliable medical insights. To evaluate these models, benchmarks are used to measure the performance ability for these models. One example is Google's Med-PaLM-2, an LLM fine-tuned on medical data. When tested against the MedQA benchmark - which includes over 11,000 USMLE medical questions, Med-PaLM was the first to surpass the 60% pass mark, scoring 67.6%. Med-PaLM-2 significantly improved on this, reaching 86.5%. A panel of physicians also found Med-PaLM-2's responses to 1,000 consumer medical questions superior to those of human doctors across 8 of 9 domains, including factuality, precision, reasoning and risk of harm.

The impressive benchmark scores and physician preference ratings for models like Med-PaLM-2 show that fine-tuned LLMs are capable of passing more than just exams, but they're producing high quality, reliable and clear responses. This

signals a paradigm shift for medicine. LLMs are no longer futuristic concepts but practical tools addressing long-standing challenges, from easing administrative burdens to accelerating medical research and treatment discovery.

LLMs have already made their mark in areas like clinical decision support and diagnostics. For instance, Microsoft's AI Diagnostic Orchestrator (MAI-DxO) uses multiple LLMs to collaboratively diagnose complex medical cases, achieving 85.5% diagnostic accuracy on 304 challenging cases from the NEJM, compared to just 20% for experienced doctors. It's worth noting that the doctors in this study didn't have access to textbooks or colleagues for guidance, which may have skewed results. Moreover, the model is still in its early stages and has not yet been peer reviewed.

In clinical trials, the open-source LLM TrialGPT developed by the National Care Institute and National Library of Medicine, has introduced a new AI algorithm that streamlines clinical trial recruitment. By assisting clinicians and patients with trial retrieval, matching and ranking, TrialGPT has reduced patient screening time by 42.6%, offering a significant boost to recruitment efficiency.

In clinical practice, AI scribes like Heidi Health are helping to ease the immense administrative burden on clinicians. By automatically generating patient notes from consultations, this tool is now assisting in over 1.5 million NHS appointments every month. In a 25-day trial involving 47 GPs and more than 2,800 patient consultations, results showed documentation time during appointments reduced by 51% and after hours admin drop by 61%.

These examples are just a fraction of the domains where LLMs are being deployed including, but not limited to medical knowledge retrieval, biomedical research, patient-facing applications, public health and personalised medicine.

However, this technology is not without risks. One key concern is the "black box" problem. This term describes the lack of transparency in how these models arrive at their decisions or generate outputs. While emerging efforts in Explainable AI aim to offer clearer insights into model decision making, the black box issue remains problematic in healthcare, where every decision must be justifiable.

Furthermore, LLMs are susceptible to something called hallucinations. This is where they produce factually incorrect information that the model poses as plausible. For example, a study on medical text summarisation found a hallucination rate of 1.47%. While this may seem low, the study also found that 44% of these hallucinations were classified as major because they could impact patient diagnosis or management if left uncorrected. This issue can exacerbate the confirmation bias in clinicians, as the models' confident sounding but incorrect information may be uncritically accepted.

Another key concern is bias and inequality. LLMs learn from the vast and sometimes 'imperfect' datasets that they're trained on. Clinical data can have mislabelled or missing information and may reflect the different ways care is delivered across various healthcare institutions. Moreover, even if this data is accurate, it can still mirror societal inequalities allowing these models to inherit societal biases inherent in healthcare systems. This can lead to models that underrepresent demographic groups or patients from low socioeconomic backgrounds, generating biased or less accurate outputs for these populations.

The biggest obstacles to clear implementation however, lie in infrastructure and regulation. For LLMs to be most effective, they need to securely integrate with electronic health records which requires robust interoperability standards that are still in their infancy. Furthermore, regulations are still catching up. While initiatives like the NHS AI framework provide a foundation for deployment, they don't yet provide clear guidance on medico-legal challenges. The question of who is responsible: the clinician, the developer or the system when an LLM provides a harmful recommendation remains largely unanswered.

In conclusion, we find ourselves at a crossroads in healthcare innovation, balancing both excitement and caution about the future of AI in medicine. My admonishment to the clinical community is clear: don't stand on the sidelines. Clinicians possess invaluable expertise that tech developers alone can't match. Our deep understanding of patient needs, clinical work and ethical considerations are crucial for ensuring AI tools are not only effective but also safe and practical. With OpenAI's recent $40 billion funding round and its shift from a non-profit to a for-profit structure, we cannot assume their goals will always align with ours. While LLMs are powerful tools that can address inefficiencies in the healthcare system, they are still just that, tools. Once we reach Artificial General or even Super Intelligence, the shape of medicine could change dramatically, but the responsibility of integrating these models into practice remains with us. Continuous evaluation and human oversight will always be essential to ensuring AI serves its highest purpose: improving patient care.

References available on request at gktgazette@kcl.ac.uk

SCIENCE AND RESEARCH

Ozempic: The Reality

Tresa Martin **MBBS2**

We've all heard of ozempic: medically used to treat diabetes, but also popular as a weight-loss drug, reported to be used by celebrities such as Sharon Osbourne and Rebel Wilson. It seems like an easy way to lose weight without having to put in hours at the gym or watch your diet. But how does Ozempic actually work, and what are the potential risks and benefits of using it?

Firstly, what actually is ozempic in the medical world? Ozempic is a brand name for semaglutide, which is part of the GLP-1 receptor agonists group. Semaglutide acts through activating the GLP-1 receptors primarily located in the gastrointestinal tract, pancreas and brain, and has effects such as slowing gastric emptying, increasing pancreatic beta-cell proliferation, and reducing glucagon release. All of this leads to an overall reduction in appetite, thus promoting weight loss. This is why semaglutide is used to treat type 2 diabetes: type 2 diabetes is primarily caused by insulin resistance, and in this condition, blood glucose levels cannot be brought back down to normal after a meal- taking semaglutide leads to blood glucose levels being lowered, and hyperglycaemia is prevented. The weight loss is a side effect: semaglutide enhances satiety (by interacting with GLP-1 receptors in the hypothalamus), and so people taking it tend to eat less, as they feel 'full' faster.

Semaglutide is also used for 'weight loss and weight maintenance', under NICE guidelines, and is used in conjunction with diet control and exercise. Additionally, semaglutide can only be used for a 'maximum of two years, and within a specialist weight management service providing multidisciplinary management of overweight or obesity...' Patients must also 'have at least 1 weight-related comorbidity and a BMI of at least 35kg/m2 , or a BMI of 30-34.9kg/m2 and meet criteria for referral to specialist overweight and obesity management services.' Clinical trial evidence shows that semaglutide may even 'decrease the risk of cardiovascular disease.'

With any drug with side-effects of weight loss, there needs to be safeguarding in place, to protect people with eating disorders or issues with body image. Even though the fact that semaglutide induces satiety can be useful in cases of over-eating, it can have quite the opposite effect, for example in underweight individuals, leading to malnourishment. That's why ozempic is mainly prescribed to adults over 18, with type 2 diabetes, and with a BMI greater than 35kg/m2, and have additional psychological or other medical conditions related to obesity. However, if one is below the BMI of 35kg/m2 and they have type 2 diabetes, they can be prescribed ozempic under two conditions: firstly, if using insulin would affect their job due to risk of hypoglycaemia, and secondly, if weight loss would lead to improvements in other areas related to obesity.

But we need to be aware that rapid weight-loss can trigger worsening eating disorder behaviours and thoughts; additionally, the way these drugs are promoted by celebrities and pop culture can be incredibly harmful for mental health. The promotion for ozempic doesn't discuss the common side effects, and doesn't allow patients to make an informed decision, which is why it's so important for those in the medical profession to be educated on this.

Furthermore, UK data shows that 82 deaths have been linked to the adverse reactions of GLP-1 agonists, and of these, data from the yellow card system shows that 29 of the reported deaths were related to semaglutide (Ozempic, Rybelsus, Wegovy). Some hospitalisations came from 'a very small number of people' who used fake Ozempic pens- these pre-filled pens can be bought online and claim to contain prescription only GLP-1 receptor agonists. In response, the Society for Acute Medicine's president has talked about the concern about ozempic use- one concern being that some patients may not properly understand the risks of taking weight-loss medication, and also that the weight-loss drugs are being obtained from 'non-reputable sources' and risk injecting a potentially dangerous substance into their body, as it may not actually be a weight-loss drug. However, the Medicines and Healthcare Products Regulatory Agency (MHRA) has pointed out that as the use of GLP-1 agonists has increased, the number of reports to the yellow card system has increased too. Additionally, deaths from adverse drug reactions reported through the yellow card system do not always mean that the death was caused by the drug- it means that the person reporting the death suspected that it may have been. Therefore, each case should be thoroughly evaluated to avoid jumping to conclusions and make sure that the cause of death is accurate. So at the moment, we can't say for sure whether all these 29 deaths were definitely related to an adverse reaction to semaglutide, only that it is suspected, and more analysis will need to be done. The fact that the MHRA warned that GLP-1 agonists may raise the risk of pulmonary aspiration during surgery brings to light another issue. Since the GLP-1 agonists slow down the emptying of one's stomach, even though all patients follow pre-operative fasting advice, there is still a risk to patients taking GLP-1 agonists as they can have 'residual gastric content' and 'could experience pulmonary aspiration, potentially causing pneumonia.' Although most patients are happy to tell their doctor whether they are on any medication and if so, which medication, those who may be using GLP-1 agonists from non-reputable sources, or for the sole purpose of wanting to lose weight, may not be willing to say so, which puts patient safety at risk. The MHRA has already said they have received 'a very small number of reports of aspiration during a surgical procedure associated with GLP-1 or dual GIP/GLP-1 receptor agonists...' This emphasises the importance of directly asking patients whether they are using these drugs, to avoid complications during surgery. The European Medicines Agency has also conducted a review advising that the product information for GLP-1 and dual GIP/GLP-1 receptor agonists should reflect the increased risk, however there is still a lack of evidence to advise doctors of a new fasting guideline or to recommend the optimal time to pause the use of GLP-1 receptor agonists before anaesthesia.

On top of that, there are many common gastrointestinal side-effects to semaglutide, including nausea, vomiting, diarrhoea and constipation, which have the potential to persist for several days

and thus lead to serious complications such as severe dehydration and kidney damage, resulting in hospitalisation. This is why patients are advised to stay well hydrated, and should also be informed about the more serious (albeit less common) side effects, such as acute gallstone disease, pancreatitis and serious allergic reactions. This again reiterates the importance of medical professionals in their role of fully informing patients about the medication they are taking.

Additionally, an editorial published in the BMJ mentions that 'the rapid weight loss seen when taking GLP-1 drugs, is accompanied by a large loss of skeletal muscle.' They mention that studies done on the general population show that '39% of the weight lost with a GLP-1 drug is from lean mass... equivalent to around 20 years of age related muscle loss.' This data raises concern for those 'who may already be at increased risk from sarcopenia, falls and frailty, such as older adults.' To add to this, the same editorial points out that after discontinuation of GLP-1 receptor agonists, 'up to 50% are estimated to regain weight.' This highlights the fact that simply focusing on diet and exercise may be a better way to lose weight, but also brings attention to the fact that we still don't know what the long term effects of GLP-1 receptor agonists really are, and if discontinuation of GLP-1 receptor agonists could lead to the patient gaining the weight back, it is possible that they may never stop using GLP-1 receptor agonists, leading to long-term effects which are unclear at the moment, and more research urgently needs to be done.

However, a potentially positive impact of ozempic could be a reduction in metabolic-bariatric surgeries. Research discussed in The Harvard Gazette shows a correlation between the two: 'anti-obesity medications more than doubled from 2022-2023' and in the same period, '25.6 percent decrease in patients undergoing metabolic bariatric surgery to treat obesity.' Whilst this appears to suggest that patients are swapping surgery for pharmaceutical treatment of obesity, there isn't enough evidence at the moment to confirm this for sure. Additionally, it's unlikely that ozempic is an equally effective substitute for metabolic bariatric surgery (which not only helps patients lose weight, but also reduces the amount of food that the stomach can hold, allows malabsorption of food, and alters gut hormones). There's definitely potential for ozempic to become a more preferred treatment than weight-loss surgeries for some patients, but at the moment, it seems that it's still too early to tell for sure.

As future clinicians, it's important to prepare for new drugs, like ozempic. From making sure clinicians are educated on new drugs, to informing patients on how to use them safely, there are many factors that need to be carefully considered when a new drug is introduced. In particular, it's incredibly important to inform patients fully about new drugs, to prevent drug abuse. If a patient has been fully informed about a new drug by a clinician and accepts the risks, then ultimately it the patient's decision whether to take or refuse the treatment- the core of patient-centred care.

Overall, whilst ozempic is part of a group of drugs (GLP-1 receptor agonists) which can hugely benefit patients with diabetes, it's important to be aware of the side effects, like any other medication. The media often emphasises the aesthetic side of some medications, and downplays risks, which misinforms people and can ultimately harm them into making decisions that they're not fully informed about, with potentially dangerous consequences. Hopefully, as more research is done into GLP-1 receptor agonists, medical professionals will be better able to advise and support patients who are interested in weight-loss, and people will become more aware that what's seen in the media, isn't always the reality.

When Tradition Meets Science

Alisha Sharma **Biochemistry BSc Y2**

More than 5000 years old, Ayurveda has been the pillar of holistic health. As The Times of India defines it, Ayurveda is "the science of life", uniting physical, mental, and spiritual health. It focuses on targeting the underlying cause, not just the symptoms. Passed down from generation to generation, this tradition is no longer practised just within households; Ayurveda is being studied, refined, and integrated with modern science and technology. Over the summer, I had the privilege to find out during an internship at Himalaya's Global Research Centre in Dubai, UAE, how centuries-old Ayurvedic knowledge is combined with science to address modern health challenges.

Turmeric ("Haldi") is a beloved ingredient in Indian kitchens and was also used to treat sprains, swelling, and wounds. Today, turmeric has been established as an active ingredient that is anti-inflammatory, anti-microbial, and a potent antioxidant and thus, is often used in skin care products such as face washes or face masks. But the application extends beyond personal care; In 2018, a systematic review and randomised clinical trial, by Pinzon & Sanyasi, was carried out to discuss the use of turmeric for arthritis pain. The paper concluded that turmeric is effective in reducing pain among arthritic patients. Additionally, it is safe and does not cause any profound adverse effects.

Another Ayurvedic herb that is gaining attention among young professionals and athletes is Ashwagandha, due to its adaptogenic properties. Clinical studies using the Profile of Mood States assessment showed that ashwagandha supplementation reduced fatigue and tension in young adults. Healthcare workers specifically noted reduced mental stress and lower fatigue levels. During my internship, I was able to see how these scientific findings translate into real-world applications: Ashwagandha supplements, in the form of gummies. Instead of traditional tablets, the Ashwagandha gummies offer a convenient format that supports stress relief and relaxation while utilising the beneficial properties of the herb.

Turmeric and Ashwagandha are just two examples of how Ayurvedic herbs are being transformed with science to target modern demands. However, reviving old remedies to accommodate contemporary lifestyles without losing their authenticity, as mentioned by The Times of India, is not without challenges. For Ayurveda to integrate with medicine, I witnessed that consistent quality, rigorous safety, and stability testing are integral to ensure credibility is achieved. Moreover, large clinical trials and studies are carried out to scientifically back the effects of Ayurveda.

If there is one key takeaway, it is that Ayurveda is not static; it continues to evolve through research and innovation. Instead of being replaced, it is being enriched for the modern world. As the world increasingly looks to its natural roots, Ayurveda proves that nature always finds a way to triumph.

Online Friends Shop

Via the Friends pages of the Guy's & St Thomas' Website

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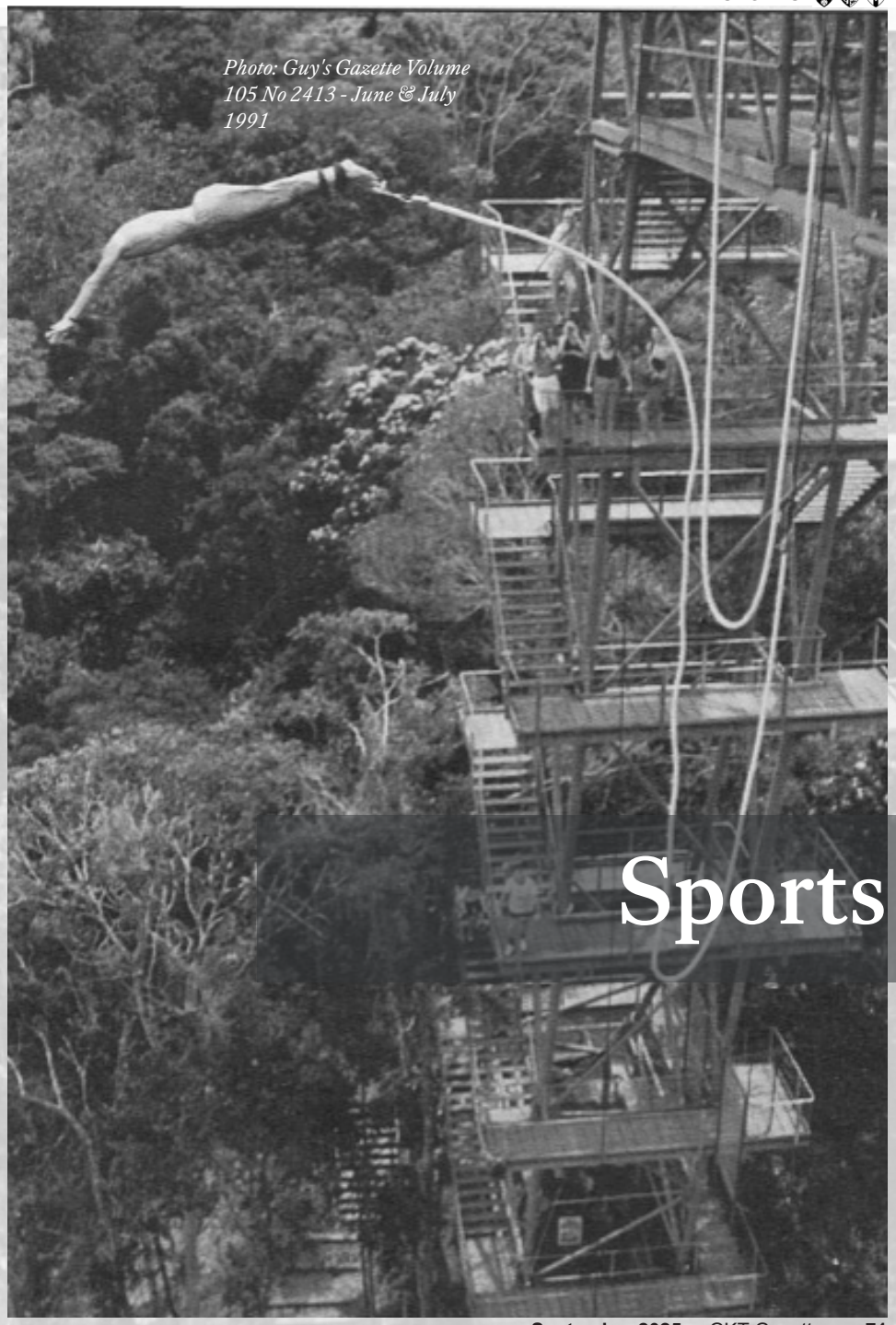


Photo: Guy's Gazette Volume 105 No 2413 - June & July 1991

Sports

GKT Hockey's Pre-Season Rundown

Nayan Perera **MBBS3**

Hopfest 2025, Saturday 6th September 2025

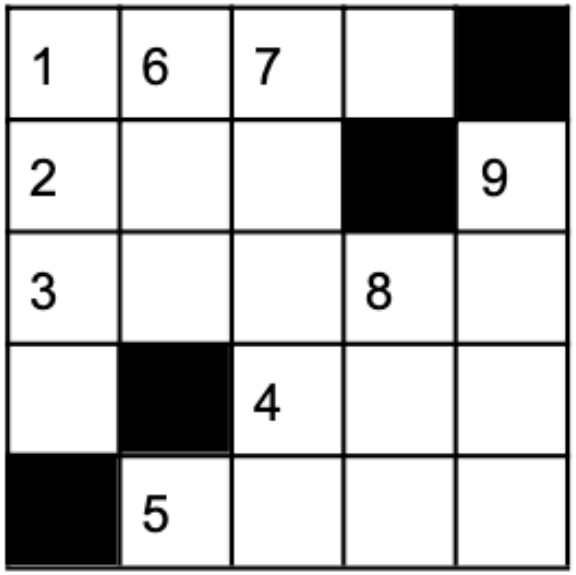
GKT Hockey club are looking forward to a new season for their 8 teams which included a record number of women's club memberships last year. The women's club reached new successes last year, including the women's 1st XI being promoted as well as the club hosting the KCLSU charitable event of the year, winning varsity against RUMS WHC and being awarded MSA club of the year. The men's club was not also without achievement, with the 1st XI extending their unbeaten runs in both Varsity and Macadam with two great wins towards the end of the season. GKT MHC also won in LUSL league and the 3rd XI recorded their highest BUCS finish!

The medical school's hockey club, with members across healthcare and science courses as well as a wave of members from the Strand campus, will be expecting another successful year with its diverse range of members, from their courses to hockey abilities and will be wishing for new students to pick up the sport from scratch - or help the club to more iconic moments for both its 1st XIs.

The club will also be continuing its support for the Grace O'Malley Kumar Foundation as well as a new partnership with Southwark Foodbank this year meaning more exciting and pertinent events to follow on from last season.

Puzzle BREAK!

Christine Yue **MBBS3**



Across

1. PQRS
2. Aortic Root abbr.
3. Emergency transfers, briefly
4. Tiny fat globules gone rogue after a fracture abbr.
5. Ligament often sprained in ankle inversion abbr.

Down

1. Traveller's diarrhoea (abbreviated FULL name)
6. Free school holiday 2019 (SARS-___-2)
7. Surgeon's patch job
8. What penicillin won't do, this will come through
9. Skeleton's building blocks in Latin (this one's for you Dr. Hunter)

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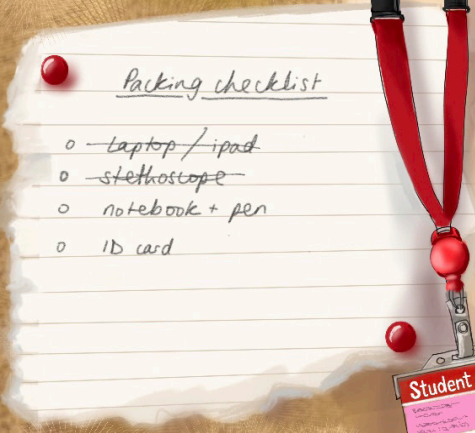

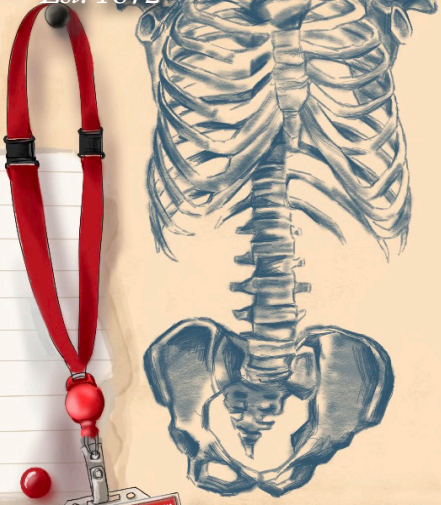

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