The Future Experts in Eyecare.

A series of Essays by students and graduates about their personal journey with eye care.

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Clarifying Human Potential: Helena Shaji

My journey into the world of vision care began with a moment of profound relief, wrapped in childhood innocence. Following my first eye examination, I remember staring intently at my mother’s face on our drive home, absolutely fascinated. I couldn’t help but point out a clear, prominent freckle near her nose- a detail completely hidden from me until that afternoon. My mother laughed, slightly annoyed by my sudden commentary. Once I got home, I was ecstatic to proceed to find new “victims” to announce that my world, my family, had gotten clearer and more beautiful than I ever imagined. For this, I always held deep respect and gratitude for all optometrists. It was through their care that my school boards became less blurry and my goals and ambitions seemed more achievable. I realised early on that to clarify a person' s vision was to clarify their potential.

Looking up at the night sky, I am always struck by the realisation that astronomy and optometry share a singular, precious currency: light. The photons traveling millions of light-years across the cold vacuum of space only truly become information when they interface with human biology. They pass through the cornea, bend through the lens, and focus perfectly onto a tiny patch of tissue at the back of the eye. To me, the human eye is not just a biological organ; it is a beautifully sophisticated, natural telescope. My fascination with the cosmos taught me that vision is one of our most powerful link to understand reality and the world around us. This profound intersection - where the untamed physics of the universe meets the delicate mechanics of human sight - is exactly what drives me to stay curious and research more about the eye. As someone who is both fascinated in physics and curious about how the eye functions, I found myself immersed in books that discussed these niche interests I was drawn to. For example, in Eye and Brain: The psychology of seeing, Gregory (2015) highlights that human vision relies on a very narrow visible band of the electromagnetic spectrum, observing that "looked at in this way we are almost blind!”. This newfound perspective helped me understand the fragility of the visual system- a fragility that transitioned from an astronomical concept to a

tangible clinical reality during a specific moment during my week shadowing an optometrist.

I observed an elderly patient as she entered the eye test room, explaining that her vision had recently deteriorated to the point where she struggled to see her grandchildren clearly. Just as blurry school boards had once threatened to distance me from my education, her fading vision was distancing her from her family. This thought immediately captured my attention, prompting me to wonder what was causing her vision to deteriorate and how the changes within her eyes were affecting what she could see. Using OCT imaging alongside clinical assessments, the optometrist identified mild cataracts and asteroid hyalosis in her eyes. I was instantly fascinated by how these suspended particles glinted under the slit-lamp, resembling the cosmic debris I had read about in physics, yet serving as a stark reminder of the physical barriers that can disrupt vision. As the optometrist explained these findings, I noticed the patient becoming increasingly concerned and asking whether her uncommon condition could lead to potential blindness. What particularly stood out to me during this session was not only the optometrist's clinical knowledge, but the way he communicated his findings. He reassured the woman that her condition was manageable, adding that "the world would be a boring place if we were all the same". I noticed how this simple yet humorous comment visibly eased the patient's anxiety.

This experience challenged my initial understanding about the role of optometrists by demonstrating to me that effective optometry extends beyond identifying and managing pathologies. It required empathy, patience and the ability to communicate complex information in a simpler way that reassures patients during what can be an understandably frightening experience. This realisation solidified my desire to pursue a career in optometry because of its combination of scientific understanding, clinical decision-making and patient-centred care. I was particularly drawn to the role optometrists play in primary eye care, where regular examinations can detect ocular abnormalities and facilitate appropriate management or referral, highlighting the responsibility they have as frontline defenders in protecting patients'

long-term visual health and quality of life. It was this very interaction that made me realise individual clinical care, while deeply impactful, must be scaled beyond the walls of a local practice to reach those who remain invisible to healthcare systems.

Sight preservation must be of paramount importance for all ages since the consequences of impaired vision can extend far beyond sight itself, creating a chain of effects that can gradually erode independence and quality of life. For example, impaired vision compromises one's ability to successfully do daily activities such as reading, distinguishing faces and navigating environments. This can then lead to a loss of independence and reduced confidence. Over time, these limitations can reduce social interaction and contribute to isolation, with consequences that can extend to emotional wellbeing; however, this got me thinking, if vision depends on such a remarkably sophisticated optical system, what does it actually mean to preserve it when that same system begins to fail? This question has shaped how I imagine the future of eye care.

The future of eye care lies in preventing the silent progression of blinding conditions such as glaucoma, diabetic retinopathy, and age related macular degeneration. Since these diseases typically destroy ocular tissue without causing early pain, patients rarely seek help until irreversible damage has occurred. To overcome this, eye care must shift from a reactive treatment model of treating established disease towards proactive screening and earlier intervention. This transformation relies heavily on deploying artificial intelligence algorithms directly into primary care clinics to automatically analyse retinal scans and detect abnormalities instantly. By pairing AI diagnostics with emerging at-home devices, eye care can transcend traditional clinical walls. This approach ensures high-risk patients are triaged to specialists long before symptoms manifest, ultimately transforming the eye into a predictive window (Burton et al., 2021). This paradigm shift could soon predict systemic cardiovascular or neurodegenerative changes years before physical symptoms surface.

Simultaneously, we must urgently bridge the stark geographic divide in specialist access, which currently leaves millions in rural and low-income

areas vulnerable to preventable blindness (World Health Organisation, 2019). By integrating AI driven screening algorithms into community health hubs, local healthcare workers can instantly identify complex conditions without requiring an onsite ophthalmologist. When complex cases do arise, portable smartphone-based fundus cameras allow clinics to capture high resolution retinal images and upload them to cloud networks for immediate, remote specialist review (National Institute of Ophthalmology, 2026). Furthermore, deploying mobile vision clinics and cross training local nurses for triaging and post-operative checks reduces the burden on centralised urban hospitals. By dismantling these geographical barriers through technology, we can ensure that a child in a remote, low-income community can see the same clear school boards and hold the same achievable ambitions as a child sitting in a well-funded urban centre. Geography must no longer dictate a human being's quality of sight.

Ultimately, while the future of eye care will be increasingly digital and technological, its purpose must remain fundamentally human. Technology will inevitably rewrite how we examine the eye, transforming it into a digital frontier. Yet, the ultimate mandate of vision science remains profoundly human: to anchor individuals to their families, communities and the goals that vision loss might otherwise place beyond reach. As I look forward, I am driven by a singular, enduring ambition: to bridge the gap between the untamed physics of light and the equitable preservation of the valuable gift of human sight.

My Window into Ophthalmology: Dania Mehdi

Seeing. Vision is something most of us take for granted. We go about our daily lives surrounded by screens, rarely stopping to consider the wonderful complexity of our eyes or what it would mean if our eye health started to deteriorate. I have always loved the phrase “the eyes are the window to the soul”. This phrase resonates with me as the eye is more than just an organ of sight; it is a special window into both our deep emotions and our nervous system.

My relationship with ophthalmology started before I even knew what the word meant. At around three years old, I underwent bilateral squint surgery. Although I do not remember the details of the operation itself, I fondly remember the numerous eye appointments that followed throughout my childhood. The ophthalmologists and eye care professionals always made me feel safe and reassured, turning what could have been an intimidating experience for a young child into something I looked forward to. At the end of each appointment, I would often be rewarded with a sticker or a teddy bear. These small gestures meant a lot to me as a young girl struggling with her eyesight. At the time, I did not understand the importance of these appointments or why my vision needed to be assessed so carefully. Looking back now I realise that my early experiences shaped my perception of healthcare, left a lasting impression on me and ultimately sparked my interest in pursuing medicine as a career. A speciality that I first encountered as a young girl, without fully understanding it, eventually became one that I actively seek out and continue to explore as a medical student.

Over time, I developed a great appreciation for the doctors who treated me as a child. Learning about what squint and amblyopia were later in life and in medical school, I began to understand the significance of the treatment I had received. Having grown up aware of my squint, something I still feel slightly self-conscious about today, I became aware of how much my early treatment had improved my vision. I am grateful that I was offered early surgery to correct my squint, which has significantly improved over time and has helped me feel much more confident about my appearance. Experiencing these eye problems made

me appreciate the profound impact that doctors can have on patients' lives. My treatment helped shape the way I saw myself and interacted with others, making me realise that eye care extends far beyond correcting vision; it can influence a person's confidence, independence and overall quality of life.

Years later, I had the opportunity to return to ophthalmology but this time not as a young patient but as a medical student in Moorfields Eye Hospital. I got to see the inner workings of ophthalmology through a medical lens; I shadowed the doctors around clinics, emergency and surgery which gave me a deeper appreciation of the speciality. One case that stood out to me was in clinic where a patient had a rare eye disease and the doctors had to break bad news that his case was unfortunately not improving and could potentially lead to blindness. This was a very tense clinic to observe and made me realise that ophthalmology is not solely about diagnosing and treating eye conditions, but also about supporting patients through potentially life-changing news. It reminded me of how important the communication and reassurance I received as a child had been. Although my placement was only one week, I enjoyed it very much and I could really see myself in this speciality, especially since I have had the opportunity myself of being an ophthalmology patient.

After undertaking my psychiatry placement, I also developed an interest in mental health which led me to question how separate the mind and eye really are. This idea became the basis of my year 4 dissertation which I researched the bidirectional link between vision and psychiatric conditions, and whether one can affect the other and vice versa. I realised that ophthalmology isn't simply about treating an organ. Vision affects how people interact with the world. My research made me appreciate the importance of looking beyond the physical symptoms of visual disorders and considering their psychological impact. It also made me realise that the future of eye care should be increasingly holistic, with greater recognition of the relationship between visual health and mental wellbeing.
Thinking about the future of eye care, I believe it should involve a combination of technological innovation and a truly patient-centred

approach. As technology continues to advance, and having seen various new machines during my different ophthalmology experiences, it is incredible to think that diseases could be detected earlier, allowing earlier treatment and overall better outcomes for patients. However, I don’t believe the future of eye care should be defined by technology alone. Speaking from experience, I remember the doctors who treated me as a little child, at a time when technology was not as advanced as it is today, for their kind approach and the rapport they built with me and my mum during appointments. It was their genuine care that was most memorable.

Ultimately, future eye care should recognise not only visual outcomes, but also mental wellbeing, independence, confidence, and quality of life. My own experiences have sparked my desire to join this community of doctors and contribute to a future of ophthalmology. I wish to give patients the same sense of reassurance and trust that I experienced and remember so warmly as a child, whilst helping to improve their vision and quality of life. For me, eye care isn’t only helping people to see more clearly, but about seeing and understanding the person behind the eyes.

Looking through a different lens: Harshini Hariram

My journey into ophthalmology begins in a cliché manner. I remember being ushered to my hospital eye appointments as an eight-year-old by my grandfather after school. Overall, I enjoyed the process as much as the average child – reading the eye charts, getting the eye drops, having a bright light shone into your face, the other kids with their chaperones sat in the waiting room, cartoons playing on the TV in the background. What I vividly remember, well as vividly as a child with rapidly increasing myopia could, was how the healthcare staff treated me. They let me lead the conversations, ask the questions I had and explained everything in a way a nervous eight year old with dilated eyes and already poor vision could understand. I remember looking forward to my next appointment, where they'd repeat the process and I'd feel like I was in charge of my health and that these doctors and nurses trusted me to take responsibility of looking after my eyes.

Fast forward a couple of years, I got introduced to a different alphabet – A, C, G, T. We were learning about evolution and Mendelian inheritance and I was fascinated. These four little letters are what make us different? We're all built of the same building blocks but variation in the position of these letters in our DNA are what make me different from you? Our skin colour, hair colour, whether I have a hitcher's thumb or detached earlobe. It felt like someone had given me the key to understanding the universe. I picked up the patterns so quickly and at lunch I quickly became known as the person who would stay back to help friends understand a punnet square or draw out their family tree.

As the years went on, when it was time for me as an aspiring medical student to gain some work experience to put on my application, I found a job advert to work as a healthcare assistant in the hospital. I will say luck played its part as I was randomly assigned to work in the Eye Unit. It already felt like a familiar place with the visual acuity charts and the non-contact tonometer. This was where I began to truly understand the hard work that goes on behind the scenes by all the staff in an eye clinic before a doctor sees the patient in clinic. I got to meet patients with all types of visual loss. Some patients had 6/6 vision, some were post-op

with new blurriness and others could only count fingers or had no perception of light. I learnt how you need to adapt your communication when interacting with patients with severe visual impairment, and through the experience became more aware of my environment and how I interacted with it.

In medical school, that familiar alphabet reappeared – A, C, G, T. I was taught about how a spelling mistake in your DNA could cause disease and in some cases was not compatible with life. My curiosity fuelled my ambition and I spent the majority of my undergraduate degree determined to learn more about genomics. I exposed myself to the patient journey, beyond what PubMed articles could explain. I learnt from people who had experienced ‘diagnostic odyssey’ and heard from families who were advocates for their loved ones’ rare disease trying to find community and funding for research. I started to understand resource allocation and how we were trialling point-of-care tests to integrate genomics into clinical practice. The more I learnt, the more I knew that no matter what speciality I ended up in, I would weave genetics into the field and make it part of my career.

The older I get as life gets complex
the more I find I don’t understand,
four simple letters make it digestible
as though I hold the world in my hand.

A, C, G, T
the building blocks of life,
I may be over simplifying it
but for my mind it’ll suffice.

How these letters
change between us two,
just shuffle them around
and they separate me from you.

But that’s not all they do
it’s code that keeps us alive,

teaches our body how to work
yet simple mistakes can deprive.

Personalised treatments
though they're along way away,
would get rid off all the faff
the trial and error patients experience day to day.

With genetic tests galore
at the moment we can diagnose,
give patients information and advice
and for some that's all they need to know.

A, C, G, T
the building blocks of life,
I believe what we learn from genetics
may help more people thrive.

It may have been luck again but I like to think that every experience had quietly been leading me to my Eureka! moment. In my taster week in ophthalmology, I managed to get squeezed into one single theatre list. Lo and behold it was a clinical trial by an ophthalmologist involved in gene therapy work where I got to observe the full process of an expensive gene therapy being hand delivered to the chief surgeon. I was then entrusted with the very important role of security, guarding the million dollar treatment with my life. This little medication an amalgamation of letters, in their original healthy form, contained in a vial smaller than my thumb had the ability to prevent further sight loss for this kid. I helped with the prep of the drug, held it in my gloved hand, terrified I was going to drop it and cost this child the price of sight. But at the same time, so thrilled to be a doctor in this age of genomics.

Up until that point I'd always known I wanted to incorporate genetics into my career. I'd even considered becoming a clinical geneticist, but delivering diagnostic information to patients and families did not seem like it would satisfy the hands-on clinical approach I knew I craved. I can't say there was simply one experience that opened my eyes but I

knew I had found a career path in which genetics could do more than explain disease. It could potentially treat, maybe one day cure and I had the opportunity to witness that first-hand in theatre. It all felt as though everything had come full circle: from being a child in a paediatric ophthalmology clinic to now aspiring to become an ophthalmologist-geneticist. Somewhere along that journey, I realised I wasn't choosing between ophthalmology and genetics— I had subconsciously stumbled into the place where they belonged together.

My future in eye care: Isabella Lau

The intricacy of anatomy, complexity of mechanisms within the human body, and the profound role of genetics have always been what I found most interesting in school since I was 14. When I gradually became an elite figure skater, surrounded by other elites and even being coached by Olympians, my personal experiences and hearing about the struggle of others' physical well-being and health, especially serious injuries, made me certain that a career in medicine is what I want, particularly when meeting patients with their own unique story and working alongside them to overcome their challenges medically. A career in trauma and orthopaedic surgery was what I thought I would like to pursue, but this thought had changed a few years ago.

Although the majority of people understand and acknowledge the profound impact medicine has on society, its significance does not truly resonate with us until we personally or someone close to experienced it. For me, that moment came when my younger brother got diagnosed with his retinal detachment and cataract.

My interest in ophthalmology began to develop a few years ago when my brother was diagnosed with a retinal detachment and a cataract at a very young age. We found out the cause of his cataract after he was referred to Moorfields Eye Hospital due to his unique and complex nature of his case, as doctors at our local hospital couldn't figure out the cause. While supporting the long and difficult journey my brother is experiencing, this has also made me gain a deeper insight into some other parts of medicine and, most importantly, I developed a strong interest in ophthalmology.

Researching different conditions, their causes, and treatments has been something I started to do and found fascinating since the first time I truly understood my brother's case from his doctor, as well as how individual structures and mechanisms of the eye work together. Therefore, when my school encouraged us to find our own work experience placements for our personal development, I immediately knew that Moorfields was where I wanted to undertake mine. This isn't just because I feel a special

connection to Moorfields through my brother, but because my brother's story made me realise that my ambition to pursue a career in the medical field is not simply about reaching a particular destination, but about continuously challenging myself, helping families in need like the doctors did to my family, learning and developing throughout my career, and most importantly learn from those at the forefront of the field, listen to their own stories about their career development alongside the challenges that I can learn and get inspired from, just as I did with my figure skating career.

The first day of my work experience was also the first time I had walked to Moorfields alone. It was a completely different experience. For the first time, I was able to slow down, calm myself, and truly observe my surroundings; patients from around the world arriving with their family members, hope in their eyes, just as my parents and I once had. At that moment, I began to truly appreciate the impact of Moorfields, not only on eye care in England, but worldwide.

I was very fortunate to be able to switch between different departments each day during my week at Moorfields, shadowing and learning from doctors, members of staff, and volunteers, each of them contributed to patient care in different ways that I learned a lot from. However, one of the most significant days of my placement was the day I spent in the injection clinic, where I shadowed an ophthalmologist and observed the relationships she had built with her patients throughout their journeys. Some patients even kindly shared their own stories with me, describing the physical and emotional struggles they had faced and how their doctors had supported not only them, but also the family members.

The opportunity to observe intravitreal injections up close was not the only reason this day stood out to me. What remained in my mind the most was witnessing the joy shared between patients and their doctor when improvements in their condition were seen on their medical records. For some patients I met that day, this progression meant regaining part of their independence that they had once lost, for example being able to walk on the street alone again. Seeing these moments gave a deeper meaning to something that I had already learned through

personal experiences: difficulties can be overcome. However, witnessing multiple people experience this in various ways within a day made that understanding feel far more real. It showed me that behind every statistic or improvement in a medical record is a person gradually regaining a part of their life, something that didn't strike me as deep as that day ever did.

Another particularly memorable day was the day where I spent shadowing a surgeon whom I later discovered had once cared for my brother during one of his visits to the children's A&E. Throughout the day, I was fortunate to have the opportunity to observe several strabismus correction surgeries. Although watching surgeries up close was undoubtedly memorable, what was exceptionally memorable to me were the conversations I was fortunate to have with the doctors and nurses in the theatre. The more I listened to their experiences and stories from their careers, the more intriguing I found a career in eye care.

However, it was my time at the children's glaucoma clinic later that day that made me certain about my passion towards a career in ophthalmology. It was more than simply just learning about glaucoma, its effects on the eye, such as how the appearance of the pupil changes can provide clinical information, and communication skills between family members of the young patients. It was the way the doctor I shadowed encouraged me to think further after each patients' meeting, asking me to carefully observe each patient's eyes, identify anything unusual, and have a think of what might explain my observations before discussing the case with me. Learning this way challenged me to move beyond simply memorising facts, instead think critically about how different signs and symptoms could be connected. It didn't only strengthen my curiosity, but also helped me discover more about myself: how much I enjoy the process of observing closely, critical thinking, questioning what I saw, connecting individual details, and gradually putting pieces together, understanding each individual patient's case.

Before my brother's experience and my work experience, I thought being an ophthalmologist and part of the eye care community was just about

treatments and patient support. However, I have realised that every day I walked out of Moorfields Eye Hospital, I learned something new about eye care and myself, including what truly draws my attention to eye care and specifically ophthalmology, more than I was when I stepped through the door in the morning.

I began to understand why ophthalmology appeals to me above all other specialties in medicine. It combines many different aspects of medicine that I have always found fascinating: the complexity of human anatomy, the challenge of understanding how different mechanisms work together, and to continuously think critically and question the reason behind everything I observed. The eye is such a small organ compared to most other larger organs in a human body, however it holds such an immense role in our daily life. Therefore making observations is significantly difficult but intriguing as I slowly discover the reasons behind the symptoms. At the same time, my experiences at Moorfields showed me that the science behind a condition is only one part of a patient's journey. The deep connection between the science behind the human body, trust built between doctors and patients, critical thinking, and the emotional support between one and other in the eye care community and the patients are as deep as the connection between the mechanisms within the human body that I found enticing. I am drawn to both the challenge of understanding the science behind a patient's condition and the opportunity to support the person living with it. Therefore my experiences at Moorfields did more than strengthen my certainty on pursuing a career in eye care, it helped me understand why I could see myself continue to develop towards this field.

My Personal Reflection on Why Ophthalmology: Natalie Chuen

A significant moment for me that cemented my commitment to ophthalmology was during my 4th year ophthalmology rotation at medical school. Getting to see procedures such as cataract surgery, panretinal photocoagulation, and foreign body removal exceeded my initial expectations. However, the turning point happened when I worked alongside a consultant with a special interest in the cornea.

Of particular interest to me during my time working with this specialist was observing a Descemet Membrane Endothelial Keratoplasty (DMEK), which emphasised to me the immense knowledge, skill and precision demanded of an eye surgeon. Additionally, I sensed in the surgeon an emotional layer of deep respect for the eye as an organ, which was displayed as he operated. I was further amazed to learn that the graft was from a donor in the United States of America, impressing upon me the technical advancement, resources and international collaboration that exist to facilitate patient treatment. Throughout the procedure, I was taught in depth the steps of the operation, including the use of Tryptan blue stainin (Majmudar & Johnson, 2017), the creation of asymmetrical markings to allow proper orientation of the graft (Matsuzawa et al., 2017) and the use of specific equipment like the Modified Jones tube to place the graft with expert finesse (Christopher et al., 2023). An enthusiastic trainee directed me towards useful learning resources while exuding a thirst for knowledge that I began to parallel. Reading the review article by Terry and Chen (2019) impressed upon me the fascinating distinction between DMEK and Descemet's Stripping Automated Endothelial Keratoplasty (DSAEK). I was intrigued by the rapid innovation of an ultra-thin graft leading to significant advantages of the former in terms of visual outcomes, recovery time, and lens preservation. I learned of the necessary understanding of physics and fluid dynamics required to position the graft for DMEK and the significant factors, such as donor age, that can affect how well the graft unscrolls. Knowing that I have only just begun to learn all the technical details and research conducted about DMEK only motivates me to continue to learn more about this incredible procedure.

During my experiences with ophthalmologists, I have always noticed and appreciated their sincere kindness and willingness to share their knowledge. A cataract surgeon I was following trained me to use the slit lamp, which I was very grateful for. Seeing how earnestly he encouraged trainees to follow noteworthy cases and lead research discussions that invite enthusiasm convinced me that he was a befitting role model to follow for my own vocational path. Complementary to this is the collaborative network that exists in the multidisciplinary team. Seeing how optometrists, orthoptists and ophthalmic nurses play important roles in providing patient care broadened my view of the discipline and helped me better understand the extent to which the ophthalmologist fulfils their own role. This all results in a highly efficient, streamlined service, best exemplified in eye casualty.

It was a privilege, while working in ophthalmology, to see the immense impact that I could have on the lives of patients through this speciality. Helping someone read, drive or recognise the faces of their family again are just some of the myriad gifts that ophthalmology can offer, and having such a direct and lasting impact on a person's life is unique to this speciality. I have known this personally from experiences prior to my medical studies. When my grandfather had cataract surgery, I saw from the perspective of a relative the impact that cataracts and vision loss had on the patient and their loved ones, and the sense of liberation the family felt post-treatment. Going from the possibility that he would never be able to walk me to school again to taking me out for activities with my friends was unimaginable. The period during which I cared for my grandfather as he recovered was full of a sense of duty and emotional uncertainty exacerbated by my naivety as a layperson, only following medical instructions. This has undoubtedly moulded the way I interact with patients and their families during clinical practice to be all the more patient and empathetic. My grandmother has had myasthenia gravis as far back as I can remember, and I always noticed her ptosis at night when I would visit her. Not understanding as a child, it felt like magic when she would take
her "energising pills", or pyridostigmine, at night to help her see better. On this medication, she was very independent and later became my

grandfather's long-term carer. Through my experiences with my grandparents, I have much to thank ophthalmologists for, and my appreciation only continues to grow with my increasing study and understanding of the field.

In my studies, I have felt an affinity for the unique blend of surgical and medical discipline in ophthalmology, and the broad knowledge and problem-solving required for diagnosing conditions. I have found online lectures to be an effective and accessible way for me to bridge knowledge gaps and sate my curiosity. In particular, attending the series at the Moorfields national meeting on thyroid eye disease (TED) and reading the abstract submissions were memorable to me. It was fascinating to learn of the diligence needed in early detection and treatment in order to prevent progression to severe, disfiguring or sight-threatening TED, particularly in association with the cessation of smoking as the biggest modifiable risk factor ("Abstracts of the EUGOGO Global TED Forum 2025," 2026). My time at the summer school offered at Moorfields Eye Hospital exposed me directly to the international community of ophthalmology at all stages, from fellow medical students to world-class consultants. I felt fortunate to be able to discuss cutting-edge scientific discoveries with experts, and I could also consolidate my foundational knowledge. For example, I learned about iterative bleaching extends multiplexity (IBEX) and its applications in multiplexed imaging of organic tissue to map cellular ecosystems (Radtke et al., 2022). Such technologies, I believe, will be instrumental in further understanding the progression of conditions such as retinal disease. I was also able to gain experience handling and using instruments when I practised intravitreal injection and foreign body removal with a 25-gauge needle. I found these experiences invaluable to better understand the uses and limitations of these techniques, internalising what I had learned from my studies to a deeper level. Preparing for the Duke of Elder exam has been a great motivator for me to learn more about the vast diseases and diagnostic tools available to ophthalmologists. I have learned and cemented a sturdy baseline of knowledge from which my understanding of specialist-level concepts can grow. Through this, I have also met a warm and inspiring community of like-minded students aiding and teaching each other. This drives my own

plan to establish an ophthalmology society at Brunel University. With the friends and connections I have developed, I hope to create a robust and helpful teaching series for future exam candidates and aspiring ophthalmologists. This way, I strive to emulate a part of the kindness and guidance that my mentors have provided for me.

I began a research project under the supervision of a vitreoretinal surgeon, conducting an audit on rhegmatogenous retinal detachment. I thoroughly enjoyed my experience contributing to research through extensive data collection and learning to navigate the Medisight system interface. With the assistance of a registrar I spoke with regularly, I have made expedient progress with the first cycle. Through this, I felt that my character would match this profession well and that I want to work with similar colleagues in the future.

Eyesight is an immensely significant yet delicate part of a patient's identity, shaping how one perceives the world, connects with others and maintains their autonomy. It would be a privilege to be a part of preserving this aspect of their personhood. I am grateful for all of my past experiences that led me to pursue this speciality.

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My Grandmother’s Eyes: Aadya Thakur

My mother and I have a running joke with my father: we tell him how pretty his eyes are. We've been doing it for years, and we do it purely to watch him squirm. He gets superbly embarrassed. Then he smiles sheepishly and says, "Oh, I think I got them from my mum. Ma had lovely eyes."

She did. My grandmother was a strikingly beautiful woman - slender, with jet-black hair and soft skin - but it was her eyes I could never look away from. In India, one of the epithets for people with beautiful eyes is Mriganayani (Mrig: deer; Nayan: eyes) – and that described her very well. She had deer-like eyes - large, dark, dripping with affection and innocence.

Every time I visited, she would be waiting on the porch: sari perfectly draped, kajal in her eyes. "Come here, my little birdie," she'd say, and pull me in before I'd finished climbing the steps. I would hold on the way children do, not wanting to let go. She always felt divine to me, as if God had made her at great leisure and given her everything he had - the eyes most of all.

My grandfather was a civil servant, and the government had given him a Raj-era bungalow in Patna, on the banks of the Ganges. It had a massive backyard and a forecourt with a fountain that was switched on every evening; the coloured lights turned the whole yard festive. On weekends the family gathered there around a carrom board - cousins, uncles, whoever was visiting - with far too much food, music playing, and Grandma moving between us keeping plates full until we drifted off to bed one by one.

She had grown up in a village near the Nepal border, in a house where her father and his three brothers raised their families under one roof. Fun and busy, she called it. Marriage brought her to Patna and into a household just as crowded: her own four children, two of my grandfather's brothers who were still students, and a floating population

of relatives who came to stay. My grandfather kept unpredictable hours. The house was hers to run.

She had no formal education, and yet she ran it like a general. One modest salary had to stretch across all of it, and every month she stretched it with great effort. No shopping was complete without some solid haggling, silly expenses were ruthlessly denied. Yet, she still found room for birthday cakes, new clothes on Diwali, gifts for visiting relatives. She had a secret envelope where she routinely set aside some money. This was her modern day contingency fund she would access in case of emergencies.

She tracked her children's homework, her in-laws' medicines, her husband's travel and everything that trailed behind it, and still kept up her social life. I never once saw her in bed. She was up before me - spending most of her early morning tidying up the prayer area, lighting diya and incense sticks, and praying - and still awake long after I'd crashed out. And there I was through all of it, enchanted, trailing after her from room to room.

Everything was perfect.
Until it was not.

One evening, walking back towards the kitchen after dinner, she bumped into a pillar. It was bizarre. This was her home; she had lived in it for twenty years and knew every corner. Yet she could not see the pillar. She was as astonished as we were. We laughed it off and blamed it on her hurry, and forgot the whole thing.

Three months later, while my father was visiting, she fell in the bathroom. She hadn't seen the steps, she said. She was rushed to hospital and needed four stitches in her head. That worried us enough to press for a proper examination. That's when we learnt she was already partially blind, and that the condition was called glaucoma. It was advanced, we were told, and it would only get worse.

Glaucoma damages the optic nerve, the cable that carries what the eye sees to the brain. The most common form creeps in slowly and without symptoms, so that by the time you notice anything, much of the damage is already done and cannot be undone. They call it the silent thief of sight. In hindsight, everything rearranged itself: the pillar, the steps, the years of her complaining that her eyes felt tired. We had blamed the television. All it would have taken was one routine eye check-up.

Over the next few years, we watched her worsen in front of our eyes. What had looked like a manageable condition, a few adjustments to how she lived, quickly became something that needed active managing. Her bedroom, bathroom and kitchen were rearranged to make them safer. We put side rails at every place so that she could hold them while walking on her own. Two months later, she could not walk on her own.

This was a woman who had never needed help with anything in her house. Now we had three people looking after her. She needed help to stand and had to be fed. She needed an arm to the washroom, and her early mornings and late evenings were often painful. She said she felt as if she were in prison, her freedom and her agency taken from her. Beyond that one admission, she never told us what she felt. But knowing her, I can guess at the grief she carried. "Nothing is so painful to the human mind as a great and sudden change," Mary Shelley wrote, and she was right.

She had watched her children grow into adults with families of their own. The time had come to watch her grandchildren do the same, and she never got to finish that chapter. She knew us by touch and by voice. Occasionally, she would touch my face and try and ascertain my features. “Do you have eyes like me”, she would ask. The plain joy of seeing the next generation grow up was taken from her.

Her last days were hard. She roared like a wounded tigress, refusing all help, insisting she would do it herself.

To watch someone who was once the anchor of your family wither away like this is a hurt the family doesn't have words for. The sadness settles

over everything, like soot on a surface. You go through your day distracted, never fully present, because some part of your mind is always busy negotiating with the pain.

Eyes. A pair of eyes, as humans were intended to have, hold immense power. Eyes give you power to see, not only the tip of the iceberg, but below the surface. These same eyes allow you to interpret each scenario you encounter on a daily-basis. The moment of poignancy you felt for the old man eating alone on a table of four, the wave of adoration you felt upon seeing a mother's child smile at you, and the feeling of tranquillity when admiring the city from the niche spot of Primrose Hill. What you see at face value is what evokes the humanity within you. Your eyes are one of the five senses you hold, a doorway to the soul of a human.

Losing your eyesight can feel like a deeply isolating withdrawal from the world, cutting off your primary connection to the people and places around you. Even more is the loss of sense of agency people feel. There's a certain nobility in helping others preserve this privilege – and hence ophthalmic medicine retains its pull and charm.

Grandma is gone now. Her memory is a blessing and nothing else has changed in so many years on that front. We still tease my father about his eyes. He still blushes, and reminds me that he has got my grandmother's eyes - my grandma's beautiful eyes.
Some things you get to keep.

Beyond the Eye: Adam Marcantuono

For years, I had been searching for an answer to something I had experienced for as long as I could remember: my nystagmus. As a child, I visited Great Ormond Street Hospital, and more recently I went through four different opticians before being referred to a hospital and subsequently to Moorfields Eye Hospital. At first, my motivation was straightforward. I wanted to understand whether anything could be done to reduce the constant movement of my eyes and how it might affect the things I wanted to do in the future. Yet as I searched for an explanation, my focus gradually shifted. I became less interested only in how my eyes were moving, and more interested in why they were moving at all.

When I was referred to Moorfields, the appointment lasted around three hours and involved several different assessments. One of the first tests involved following a moving finger while my eye movements were assessed in different directions. A doctor repeated the examination, confirming what had been observed previously. I then spent around twenty minutes watching dots on a screen whilst equipment recorded my eye movements. Later, after my pupils had been dilated, my eyes were examined in detail for structural abnormalities. Seeing the detailed image of the back of my eye fascinated me. The image was in shades of black, white and grey and looked almost like a microscope image, and I had never realised that my eyes could be examined in such detail. Throughout the appointment, I was struck by how thoroughly the staff took my concerns seriously. I had spent so long looking for an answer that I had worried these tests might not find anything useful, but their care and attention gave me hope. I did not feel like a number on a chart; I felt understood, respected and genuinely cared for.

What stayed with me most was how different my understanding of the problem was by the end of the appointment. I had always thought of nystagmus primarily as something happening to my eyes: something I could see and feel but had never really understood. At Moorfields, seeing my eye movements being examined and recorded made me realise that there was much more to vision than I had assumed. I left with questions that I had never thought to ask before. Why does my

nystagmus change direction every minute or so? What changes within the system controlling my eye movements for it to switch from one side to the other? My brother also has nystagmus, but his eye movements behave differently from mine, which made me even more curious about why the same condition can affect two people in such different ways. Nystagmus involves the systems responsible for controlling eye movements, including pathways within the nervous system (Gurnani et al., 2025). Moorfields describes this connection between the eyes, brain and nerves as the focus of neuro-ophthalmology (Moorfields Eye Hospital, n.d.). This changed the question I was asking. I had gone to Moorfields wanting to understand what was happening to my eyes; I left wanting to understand what was happening beyond them.

My connection with Moorfields also goes beyond my own experience as a patient. Since I was nine years old, I have taken part in the Eye to Eye walk, completing the 15-mile route through London to raise money for the work of Moorfields. My reason for doing this has always been personal. My dad has keratoconus, which meant he saw poorly with glasses and, although contact lens areas gave him much clearer vision, they were painful to wear. Moorfields provided him with specialist contact lenses suited to the shape of his eyes, allowing him to see much clearer without the pain he had experienced before. My grandfather was once at risk of losing the sight in his left eye and received treatment that helped save it. I cannot really imagine what it would be like to lose my sight, but living with nystagmus has made me appreciate how much I rely on being able to see clearly. Even something as simple as looking to one side can sometimes be difficult for me, which makes the prospect of losing sight entirely difficult to comprehend. Seeing the difference that specialist eye care has made to people close to me has given me a lasting appreciation of the value of Moorfields and made me want to contribute to its work in the future.

I am also hoping to become involved with Friends of Moorfields as a volunteer. For me, this would be another way of giving something back to an organisation that has played such an important role in my family’s life. At the same time, it would give me an insight into more of what happens beyond the clinic and meet people whose lives are affected by

eye health in different ways. After being a patient myself and supporting the work of Moorfields through the Eye to Eye walk, volunteering feels like a natural next step.

These experiences have shaped what I want to understand about eye health, and they have also influenced the direction I have chosen to study. Neuroscience gives me the opportunity to look beyond the eye itself and understand the wider systems involved in vision. The more I learn, the more I appreciate that eye health is closely connected to the brain and nervous system, with neural networks involving structures such as the brainstem and cerebellum playing an important role in controlling eye movements (Jeong et al., 2021). This broader perspective is one of the reasons neuroscience appeals to me. I want to understand not only what is happening to a patient's eyes, but how the wider nervous system may contribute to their symptoms and what that could mean for understanding more complex conditions. In the future, I hope this perspective could help me contribute to research and clinical care, particularly as our understanding of the relationship between the eyes and brain continues to develop, and allow me to understand vision more holistically.

My own experience has also made me aware of how difficult it can be to find effective options when a condition does not fit neatly into a standard approach. In my case, my null point (the direction of gaze where my nystagmus becomes less pronounced) changes frequently, meaning there is no one consistent position in which I can hold my eyes to reduce the movement. I was told that this made surgery less suitable for me, leaving fewer options to explore. Rather than making me lose interest, this has made me more interested in what could be possible in the future. I would like to contribute to research that helps provide better answers for people with conditions such as nystagmus, whether through improving diagnosis, understanding the mechanisms behind them or developing new approaches to treatment. I do not yet know exactly where a career in eye health will take me, but I know that I want to be helpful and to contribute to a field where better scientific understanding can lead to better care for patients. What started as a search for answers about my own eyes gave me a reason to care about these

questions, but studying neuroscience has given me a reason to keep pursuing them.

The lack of straightforward treatment options has has also made me want to be part of finding better answers for people with nystagmus. Although treatment options remain limited, research is continuing to explore new approaches. A recent randomised controlled trial found that perceptual learning, using repeated visual stimulation, improved near and distance visual acuity in people with infantile nystagmus (Hecht et al., 2026). Research like this gives me hope that there are still possibilities to explore, even for conditions where the available options can feel limited. I hope that, through a career in eye health, I can eventually contribute to research like this and help turn scientific progress into something that gives patients and their families more hope and more choices.

The questions I first had about my own eyes have grown into a desire to help find answers for others. Moorfields showed me how much there is still to understand about vision, while my experiences as a patient and through my family have shown me why that understanding matters. I have seen how much specialist eye care can mean to someone and the people around them, and I want to be part of making that possible for others. I hope that, through a career in eye health, I can contribute to research and care that gives patients better answers, more options and ultimately, hope for the future.

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Understanding the spark behind the ambition in pursuing a career in eye health: Shameer Mohamed Naleer

The slew of letters came in the way most bad news does, one after another over several years, face down on the kitchen table, next to the electricity bill – mentioned as an aside. Something akin to Harry Potter's invitation to Hogwarts – yet rather than a foray of letters storming the household, these letters came over a number of years. My father didn't raise his eyes from the letters, the words 'diabetic retinopathy' or 'diabetic maculopathy' did not ring alarm bells, mentioning to me 'it's nothing' – already deciding it's something not to worry about, in the same tone he has used for the last few years. I ask myself now, as a graduate of Medicine, and as someone hoping to apply to Ophthalmology whether I should've known earlier or reacted sooner.

It wasn't a childhood diagnosis or a dramatic hospital stay of my own that made me want to be a doctor. I grew up in a London neighbourhood where diabetes runs in the bloodlines as much as the surnames, where diabetic retinopathy isn't a number in the book(Liew et al., 2014), but a similar tale narrated through household visits.

Multiple letters later and my father finally decides to attend his ophthalmology screening assessment. The ophthalmologist points towards a section of his retina, pointing towards a smudge of yellow pooling similar to a bruise you could see through the skin. She mentions macula oedema, a word which meant little to me then, but whose gravity has since hit me. What I understood without translation was smaller and stupider: my father holding the newspaper an inch further from his face than he used to, my dad asking me to read out the score because the numbers on the screen had started to swim.

That changed, in the strange and specific way that life takes you on, in a lecture theatre at Moorfields as part of my first ophthalmology undergraduate teaching at UCL. A clinical teaching fellow from India was describing a system that I had never heard of: Aravind Eye Care; little did I know that it was the largest and most productive eye care provider in the world(Ravilla & Ramasamy, 2014). He explained that operating

theatres were built with two tables instead of one, so a surgeon could close one patient's eye and pivot, without breaking scrub, straight into the next case, already prepped and waiting. He described it like my father (a chef) would describe a good kitchen in the middle of service – not chaotic, just relentlessly efficient. One surgeon, thousands of cataracts every year(Ravilla & Ramasamy, 2014), more than most UK consultants do a lifetime.

And then he went on to describe the vans/ Outreach teams left before dawn for one-day village clinics, screening people who had never seen an ophthalmologist and might never see one again, transporting those requiring surgery to a base hospital and sometimes restoring sight within a day of diagnosis. Above all, I remember the phrase, 'there's always need', a passing comment then that has stayed with me ever since.

I sat there doing a piece of unflattering arithmetic – measuring that model, a shortage deliberately made into a system, contemplating my father's ill health and his lack of engagement with healthcare in a country with more ophthalmologists per capita than most in the world.

The same afternoon, in the same lecture series, we learned something that, at the time, seemed completely unrelated; the eye is not, in fact, an isolated organ: the retina is the only place in the human body where a doctor can visualise a blood vessel without cutting the patient open (Wagner et al., 2020); hypertension writes and rewires our very own arterioles; and raised intracranial pressure manifests itself at the optic disk before it manifests itself anywhere else.

It took me longer than I'd like to admit, connecting that lecture to my dad's kitchen table. But once I did, I couldn't unsee it. The swelling beneath his macula was never really an eye problem intrinsically – it was his diabetes (complicated by his own self-denial and non-compliance), written in some place small enough that only a camera could catch it, cardiovascular disease with a retina attached. Those eyes I'd seen him squint through for years, the eyes I'd thought were just ageing the way eyes do, had been trying to tell us something about the rest of him all along.

I think about this more than I am entirely comfortable admitting: it ended up being a diagram in a lecture theatre – not years of watching my own father – that made the connection obvious. I still don't quite know what to do with that, other than notice it. This is the version of ophthalmology which pulled me in, not a speciality of the eye, but a speciality of the whole patient, viewed through the organ transparent enough to let you look.

This is where artificial intelligence stopped being an interesting side-topic and became the thing I actually wanted to work on, not because it is fashionable (it is) but because it answers the two problems that lecture left me with.

The first is Aravind's problem – reach, a fundus camera is far easier to put in a high-street optician, a GP surgery or the back of a van than an ophthalmologist. AI-supported screening offers a way to move that two-table efficiency out of Tamil Nadu, enabling validated algorithms to triage patients wherever a small camera can go. This would enable ophthalmologists to focus on patients who require specialist intervention, while safely screening those who do not. As echoed before, there's always need – AI paves a way to meet that demand without compromising quality.

Timing was the second problem – as exemplified in the case of my father. Diabetic macular oedema is not subtle once someone is looking for it on a scan, but by the time someone is looking, the disease has often had a decade's head start. What drives me is catching that disease a decade earlier – a retinal photograph taken during something as mundane as a routine eye test, flagging a cardiovascular or renal risk long before it ever reaches the macula. AI has the potential to augment this decision-making process, not replace the ophthalmologist – an opportunity to give both clinician and patient more time to act while disease remains potentially reversible. Thus, the goal is not to replace the clinician sees the whole patient and who can interpret findings within their broader clinical context to explain a diagnosis, but to extend their ability to detect disease earlier and intervene sooner.

Currently, I'm a few weeks into my machine learning research at Imperial, inside the mess of a problem rather than an articulate slide about it – datasets that behave nothing like lecture examples, models only ever as honest as the population they were trained upon(Poplin et al., 2018), and coding riddled with syntax errors. That same discomfort over Aravind and over my dad makes me afraid of an algorithm trained on the wrong population, quietly failing precisely the patient who needs it most. The ambition of closing distance and closing time is the one I want my career built around now, from inside a research placement and not an audience.

I think about all three of these as one story – not three independent ones; my dad's kitchen table; a two-table theatre in Madurai; and a screening algorithm I am now helping to build rather than merely marvel about in the literature. Each in turn asks the same questions in a different order – who gets seen, by whom and how early. The future of eye care, as I envision, is not algorithms replacing our clinicians who lie at the heart of our service - it is a system where AI can greatly improve an in-demand service.

It is a version where AI does the relentless, high-volume work of looking at every retina, everywhere, cheap, early and inclusive for all - regardless of our backgrounds. So that ophthalmologists – whom I've met on my placement, taster weeks and electives – the ones who still find time to teach between clinics and get home at a reasonable hour, are left doing the part they can do – explaining with all their grace, the diagnosis that can change someone's life – delivered by a person, with time to explain it properly. That balance – demanding enough to matter and humane enough to sustain a whole career – is part of the same future I am describing.

My father still has ongoing visual problems for now; he is not yet on any treatment (thankfully) – but he is fully understanding of what 'diabetic maculopathy' now means. This is progress. My father's illness is not a mandate, and no single family's story should shape the entire lineage which follows; however, it is my story and it is the story which made my

mission feel less abstract. My ambition to become an ophthalmologist extends far beyond a general enthusiasm for eyes – but a specific, unfinished sentence. One first read, with little understanding of diabetes, has since grown into a question I have been trying to answer ever since.

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What My Father Taught Me About Sight: Anonymous

Growing up, my first real experience of visual loss was at home.
One of my earliest memories is of my father driving me and my siblings to school when I was six. As I grew older, the school runs gradually stopped. My father spent more time at home, and I began to understand the conversations around me: my dad was losing his vision. By my teenage years, I had become familiar with the word glaucoma. At that age, I did not understand the disease, but I understood what its absence was beginning to mean. A father who once drove his children to school was now navigating a different relationship with his vision. I began wondering whether there was something I could do.

I had always loved reading, and my interests seemed to change with every passing year. Some days I wanted to become a medical doctor; on others, I imagined becoming a scientist who could make discoveries that would change the world and perhaps find a cure for blindness. Then I gained admission to the University of Benin, Nigeria, and was presented with the option of studying nursing or optometry.

I had never heard the word Optometry before. I scrambled off to research it. Then it hit me: could this be my chance to make a difference? Could I help my father?

My first year of optometry was exhausting. I studied mathematics, computer science, psychology, physics, chemistry, biochemistry, anatomy and more. Just name the course and it seemed to be on my timetable. I had entered university thinking I was going to study eyes. I quickly discovered that I was studying much more than eyes. By my second year, I began to understand how intricate vision was. To understand someone's sight, I needed to understand the body, factors outside the body and human behaviour, and how they interacted to influence eye health. I became particularly interested in how vision developed from childhood. My final-year research examined refractive errors among Junior Secondary School children in Egor Local Government Area, Edo State, Nigeria. My undergraduate research, externship and internship gave me a clearer view of the environment

beyond the consulting room. I began to see that there was a significant need for community eye health, and my passion for it grew.

I realised that an eye examination could only reach the person who came through the clinic door. What about the person who did not know they needed an examination? The person who could not afford one? The person living too far from an eye clinic? Or the person who believed their vision could wait because their sight had not yet stopped them from working?

During my mandatory National Youth Service in Nigeria, I began designing vision-screening programmes. A few years later, I found ProHealth International, where I was able to provide pro bono visual screening across Nigeria's six geopolitical zones. We reached communities where eye-care screening, management and referral were not readily available. We met professionals and people with little formal education, people with access to social media and people without internet access. Sometimes healthcare professionals came to us for services too. Despite the differences between the people we encountered, one thing became increasingly obvious to me: personalised, understandable eye-health information mattered.
I had found another gap in eye care.

By 2024, I began my MSc in Public Health at York St John University, and my understanding of eye care evolved again when I arrived in London. I volunteered at the Health Information Hub at Moorfields Eye Hospital because I wanted to contribute to making eye-health information more accessible. I expected the UK, with its more advanced facilities and established health system, to present a very different challenge.

It did.

But it also felt strangely familiar. As part of my MSc research, I examined trends in glaucoma prevalence and risk factors among adults aged 40 and over in the UK. My research brought me back to the disease I had first encountered through my father. I began to see how glaucoma in the

UK intersects with ageing, workforce demands, awareness and inequalities in access to care. People from some ethnic minority and lower socioeconomic backgrounds can experience additional barriers to accessing glaucoma care, reminding me that having advanced facilities does not automatically create equal access.

Nigeria and the UK have very different healthcare systems and resources, but my experiences in both taught me a similar lesson: the future of eye care cannot depend on clinical treatment alone. We need awareness that reaches people before their condition deteriorates. We need data that shows us who is being missed. We need research that informs what works. We need a workforce capable of responding to an ageing population. Most importantly, we need systems that do not allow someone to disappear between screening, diagnosis, referral, treatment and follow-up. This is where I see my work beginning to connect across the two worlds.

I see the future of eye care as personalised, simplified and continuous. During my Moorfields Coffee Hour presentation, I explored the idea of a glaucoma risk backpack; a simple way of thinking about how personalised eye-health information could travel with a person through their eye-care journey: understanding their risk, having an examination, receiving a diagnosis, being referred, starting management and continuing follow-up. For me, the future is not simply about finding more people with glaucoma. It is about making sure that once we find them, they remain connected to care.

Through VisionDR in Nigeria, I want to make eye-health information easier to understand and provide bite-sized advice that encourages healthier eye-health-seeking behaviour. Through my work with ProHealth International and ImpactLens, I want to use eye-health data to improve outreach, resource management and the generation of evidence for community eye health. In the UK, support from my university's Friendly Living Lab Fund is helping me translate my research into accessible materials, policy-focused communication and further community engagement. Eventually, I want to return to clinical practice too. I want to bring together what I have learned from the clinic, the community, public

health, research and technology to help reduce the burden of avoidable vision loss; not only in Nigeria or the UK, but wherever my contribution can make a difference.

Today, my dad continues to navigate vision loss with my family in Nigeria. His experience remains the quiet thread running through everything I do. I want to make a difference in prolonging someone's vision through programmes, innovation and information. I want to contribute to a future where a child does not have to watch their father stop doing the things they once took for granted simply because his glaucoma was not identified, understood or managed in time.
Perhaps, for me, the future of eye care will not only be measured by how advanced our treatments become. Perhaps it will also be measured by how many six-year olds get to have their fathers keep driving them to school.

Seeing the human behind the eye: Zi Jin

The room was quieter than I imagined: the soft clink of instruments against the metal tray, the rustle of sterile drapes, and the quiet exchange between surgeon and nurse. Beneath the hard white operating light lay an elderly woman, awake, her face reduced to two marked eyelids. Her delicate hand closed around mine with an iron grip. At the time, this was memorable for all the wrong reasons. For one, it made my stomach churn; I could not stop my imagination from placing me beneath the instruments as I watched the eyelids being dissected layer by layer. For another, my hand ached beneath the force of her grip, a pain that persisted for the next three months. When I returned to Moorfields months later, I found myself wondering why she had gripped my hand so tightly. The theatre had seemed calm and controlled from where I sat, yet the force of her grip suggested an altogether different experience under the drapes. To me, the grip seemed to convey two opposing emotions at once: fear and composure. It was both an expression of distress and a way of containing it. Although I was not operating or making a clinical decision, I found a sense of purpose in simply being present for her.

The experience led me to think about the anaesthesia of medical training. We learn to be composed, knowledgeable and technically precise, but repeated exposure can make us lose sight of what these moments mean to the patient. In many ophthalmic procedures, I observed patients remaining awake throughout, able to converse and respond to instructions. Häggström and Brodin (2024) describe being conscious during surgery as an experience of vulnerability and dependence, of “being in the hands of others” (p. 5). Although simple, hand-holding has been shown to reduce anxiety and provide psychological comfort during cataract surgery and intravitreal injections (Moon & Cho, 2001; Shaughnessy et al., 2023). This resonated with my experience as a hand-holder at Moorfields, where patients often told me that they found the gesture reassuring, appreciated having someone beside them, and would welcome a hand-holder again in future.
My curiosity about the eye had begun much earlier, around the age of ten. My parents, conscious of my father’s severe myopia, were

determined to slow the progression of my own myopia, and I found myself trying low-dose atropine and orthokeratology lenses. Around the same time, I began learning the anatomy of the eye by dissecting a bull's eye in school. I still remember its unexpected size in my hands, the resistance of the sclera as I pierced it, the clear, jelly-like vitreous that followed, and, most vividly, the blue-green sheen of the tapetum lucidum. The dissection was perhaps the first time I wanted to understand the eye for myself.

What continued to fascinate me was the disproportion between the scale of the eye and the consequences of disease within it. During my time in vitreoretinal surgery in Sydney, I saw how a macular hole measuring only hundreds of microns could disrupt the centre of a person's vision. In retinal detachment, whether the macula – only a few millimetres across – remained attached could alter both surgical urgency and visual prognosis. However, I also came to understand that anatomical improvement does not always translate into what matters most to the patient: better vision. My research into macular hole surgery challenged my assumptions about newer techniques. Studying a cohort of 2,990 eyes, we found that the internal limiting membrane flap technique could improve anatomical closure without an additional benefit in visual acuity (Jin et al., 2026). As ophthalmology relies heavily on technology, this finding made me critically aware of the need to look beyond technical innovation and ask whether it translates into an outcome that is meaningful to the patient.

My experiences in low vision deepened my understanding of vision and eye care further. While developing items for a visual functioning questionnaire and attending optometrist-led low vision clinics, I noticed the difference between measuring vision and understanding what vision means to someone. Patients spoke less in terms of Snellen or ETDRS lines and more in terms of recognising faces, reading instructions, cooking and cleaning, working and communicating, or leaving the house independently. In clinic, visual acuity and contrast sensitivity helped quantify visual impairment, but similar clinical measures could translate into different functional limitations depending on what the person needed to do each day and how their wider health affected them. I saw that

functional vision was closely tied to autonomy, drawing me towards an approach to eye care that integrates clinical measures with the functional consequences of visual impairment.

I encountered this broader meaning of eye care again when a patient presented to the acute eye clinic several hours after the sudden onset of visual loss from a central retinal artery occlusion. He asked whether any surgical or pharmacological treatment, even one he could pursue privately, might restore his sight. After the ophthalmologist explained that no established intervention could reliably restore the vision he had lost, the consultation shifted towards stroke evaluation, secondary prevention, and psychological support from an Eye Clinic Liaison Officer. What stayed with me was that the value of the consultation did not disappear when sight could no longer be restored; its purpose had shifted. In this case, eye care meant recognising the wider vascular significance of his presentation, addressing the psychological consequences of visual loss, and considering his health beyond the eye itself. The encounter led me to think of the eye less as an isolated organ and more as part of the whole person.

Eye care in children broadened my understanding of how the impact of eye disease can extend beyond the individual patient. In theatre, I watched the enucleation of an eye in a five-year-old child and later in an infant only months old. Unlike the elderly woman whose hand I had held, these children were asleep, unaware of what was happening around them. I remember the parents of a child receiving chemotherapy for retinoblastoma asking whether their own eyes could somehow be given to their son. The condition also challenged my assumption that preserving vision must always be the priority. In a child with retinoblastoma, preserving life may take precedence over preserving the eye itself. I began to appreciate how the ophthalmologist’s responsibility extended beyond treating the child to helping a family navigate uncertainty and make decisions for someone too young to understand their implications. The circumstances were incomparable with my own, yet their determination to protect their child’s sight reminded me of the concern my own parents had shown as my myopia progressed. When

the person behind the eye is a child, seeing them fully can also mean seeing the family around them.

Early in my exposure to ophthalmology, a mentor once asked me what I thought my role would be when AI and robotics became widely integrated into eye care. At the time, I had no answer. Years later, I realised that the question helped me understand not simply what I might contribute to ophthalmology, but why I wanted to pursue it. Beyond its technological precision, it is this perception that captivates me – not only how a patient sees, but what sight allows them to do, who it allows them to be, and what its loss may reveal about the care they need. This appreciation continues to draw me towards ophthalmology. The pain in my hand disappeared. The touch remained.

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When Sight Loss Became Personal: Humza Hossain

In the first year of my foundation training, my interest in ophthalmology became much more personal than mere curiosity.

The chance to visit my family's ancestral village in India changed the way I understood the impact of sight loss. Although I had been born and raised in the UK, this was my first trip to India and my first visit to the village our family came from. The village is in a rural area and lies six hours' drive from Kolkata. This was the first time my father had returned in 50 years, and the experience was deeply moving because I was able to see the village through his eyes and appreciate what it meant to him to return.

For context, the village had very limited access to modern medical services. Many families relied on Hakeems, traditional practitioners who use herbal and traditional methods, often as a first point of contact before seeking care from clinicians in larger hospitals nearby.

During my time at medical school, I studied cataracts, diabetic retinopathy, corneal disease and other ophthalmic conditions, together with gaining some knowledge of how to manage them. Yet in the village I became more aware of the effect that sight loss has on a person's independence, self-confidence and everyday interactions. Globally, cataract affects an estimated 94 million people as a cause of distance vision impairment or blindness, and the World Health Organization reports that 1 in 2 people who need cataract surgery cannot access it (World Health Organization, 2026). Those figures gave wider meaning to what I later saw in my great-uncle: cataract surgery may be one of the most effective sight-restoring interventions, but its impact depends on whether people can reach it in time.

My great-uncle, who is 81, experienced serious deterioration of his vision. I was informed that he had a dense nuclear sclerotic cataract, and because of this, as well as his various other medical conditions, it became difficult to treat him.

As a result, everyday activities proved difficult. It became harder for him to recognise the faces of other people. Movement had to be careful. When he was in his room, he seemed less certain of his surroundings and depended on other people to help him get about. I remember vividly being able to communicate with him, while realising that he could not see my face.

Over time, he developed symptoms suggestive of Charles Bonnet syndrome, with recurrent visual hallucinations (NHS, 2026). He regularly described seeing his father and brother and interacting with them, despite both having passed decades ago. This stayed with me. It showed me that untreated eye disease does not just reduce visual acuity; it can affect a person's reality and connection with friends and family. In this case, it was someone in my own family.

I had heard of Charles Bonnet syndrome before, but seeing its possible consequences within my own family changed my understanding. In medical school and FY1, I saw how the NHS usually manages cataracts through clear referral and surgical pathways. In my family's village, I saw how delayed access, limited resources and increasing surgical complexity can turn a potentially treatable condition into a life-changing disability.

The second experience involved my cousin, who was born with osteopetrosis, a rare condition that causes abnormal thickening of the bones and can be associated with vision lose, (National Institute of Arthritis and Musculoskeletal and Skin Diseases, 2023). In her case, the affected bones around the skull led to compression of her optic nerves, causing irreversible sight loss. She underwent a bone marrow transplant at 8 months and was later assessed by specialists. Sadly, specialists did not consider surgery suitable. She is now 7 years old and struggles with severe photophobia and is unable to open her eyes comfortably, with no vision.

The impact on her family has been devastating. Alongside the emotional pain of seeing a young child lose her sight, her parents have faced significant financial pressure from hospital visits, specialist assessments

and the ongoing care she requires. There has also been a psychological burden: uncertainty about her future, worry about her independence, and the constant strain of adapting family life around her condition. This wider burden is reflected with research showing that caregivers of children with eye disease can experience significant psychological strain (Pur et al., 2023).

The way my cousin's case unfolded had a deep impact on me. Although during my medical school studies I had come across rare genetic and metabolic disorders in exams, I had never really thought that such a condition could occur in my family. It was her experience that taught me that ophthalmology is not separate from the rest of medicine, since the eye can be influenced by genetic factors, systemic diseases, acute neurological conditions and child development.

My experience shaped how I worked on busy medical wards as an FY1. During my geriatric placement, I cared for patients with advanced dementia, previous strokes, delirium and patients receiving palliative care. Eye symptoms can be difficult to identify when patients have limited communication. Many patients cannot describe visual defects or hallucinations clearly. I became more aware of the importance of collateral history. My family's experiences taught me that visual impairment may sit quietly behind falls, reduced mobility and confusion, even if it is not the most dramatic presentation.

This awareness remained with me while I was on my FY1 psychiatry rotation. When patients come in with visual hallucinations or distress, there may be various psychiatric, neurological or medical reasons for their symptoms. The fact that my great-uncle might have had Charles Bonnet syndrome caused me to think about whether visual impairment or ocular pathology could have contributed to a patient's experience, especially in cases where hallucinations occurred alongside known sight loss.

My family's experiences have made me want to study ophthalmology actively outside clinical work. I began reading around cases using resources such as Kanski's Clinical Ophthalmology to better understand

how ocular anatomy, systemic disease and clinical signs are connected (Salmon, 2024).

Now, as an FY2 seeing patients in Eye Casualty at Winchester Hospital, I carry these experiences into my clinical work. I know eye symptoms may be the first sign of systemic disease, and that visual loss can have consequences far beyond the eye itself.

The way in which I listen to patients has changed. For every symptom, I now try to go beyond the diagnosis and consider its effect on that individual's daily life, for example, how it affects their ability to drive, their mobility and the amount of care they need. I am certain that this approach is important since it focuses on the impact on their lives rather than simply recording each symptom in a checklist. This becomes especially obvious in paediatric clinics, where parents are generally not only concerned about the diagnosis but also about their child's confidence and their ability to function day-to-day at school.

It was these two experiences that led me to become interested in ophthalmology. My great-uncle illustrated for me the effects of severe, potentially treatable vision loss in older age, while my cousin revealed to me the devastating impact that a rare systemic disease can have on a child's vision. These experiences have made me want to pursue a career in ophthalmology where I can combine clinical care, research and a deeper understanding of the mechanisms behind sight-threatening diseases.

My interest in ophthalmology began not with a single clinic or textbook chapter, but with family. Visiting my ancestral village made me realise that sight loss is never just a clinical outcome. It changes how people move through the world, how they recognise those they love, and how families imagine the future. That realisation continues to motivate me as a junior doctor and has strengthened my ambition to pursue ophthalmology.

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My Future is Eyecare: Ambika Joshi

‘It must’ve been late 80s, maybe early 90s that your grandparents had that surgery for cataract’ was what my dad said to me, about five years ago where I was too busy deciding whether PE or Religious Studies were a better subject to pick for GCSEs. It was just over a week ago that I had witnessed a cataract surgery live in front of my eyes, for the first time, where emotions were torn between excitement and empathy.

Optometry wasn’t even a word in my dictionary, until I started applying to universities. It wasn’t a career I had previously considered, nor a profession I truly understood. So where was this spark of passion first ignited?

For everyone else, it was just a random Thursday. For me, it was my A-level results day—a turning point where I chose to dedicate myself to a degree I was barely exposed to. Whilst I was vaguely familiar with the term ‘Opticians’, the rest of the terms didn’t occur significant to me because, as long as I collected my sparkly new glasses, in time to see the whiteboard clearly at school, that’s all that mattered. Consequently, my familiarity with eye care was limited to my own experiences of visiting my optician, having been asked ‘is it better with lens one or two’ when it looked the same half the time, choosing frame I liked, watching two Tippex dots marked onto each lens, and finally returning to collect my glasses.

Pursuing Optometry at university transformed my understanding of the eye from something I had previously taken for granted into an intricate system requiring both scientific knowledge and clinical precision. My first year allowed me to explore the interaction between anatomy, physiology and optics alongside clinical observation. This varied from practicing techniques such as retinoscopy and slit-lamp examination to assess the eye, to exploring the structure and function of different its components. What piqued my interest was how an issue in even smaller components of the eye, can have much wider consequences, potentially causing, worsening, or even co-existing with other systemic health issues.

This became particularly clear during a university essay of which I researched the cause, prevalence and effects of diabetic retinopathy. Here, I explored how diabetes, a widely widespread chronic disease, caused through prolonged high blood glucose levels, could damage the blood vessels supplying the retina, gradually deteriorating vision. Seeing how this systemic condition impacted such a delicate part of the eye made me appreciate how closely connected the different parts of the body are, how a seemingly small change can eventually lead to much more significant consequences elsewhere. How ‘it’s just a bit red, it’s probably just an eyelash stuck in there’ could become an excruciatingly painful, severely swollen purple eye, whilst you’re sat in the A&E department, just in the span of a couple of hours.

As I gradually learnt how to accurately assess ocular health, my initial understanding remained largely confined to the testing room; I had yet to appreciate how clinical decisions made by the optometrist translated into the wider patient journey.

Later on in my first year, I was fortunate enough to receive a role of an optical assistant, broadening my knowledge of this perspective considerably. Working within a fast-paced practice revealed to me how an optometrist’s clinical decisions shaped the care that followed, from recommending appropriate lens options to considering frames that accommodated a patient’s prescription, lifestyle and individual needs. I gained a greater appreciation for the collaborative nature of the optical profession, how optometrists, dispensing opticians, optical assistants and other members of the practice work alongside one another to reach a common goal – smooth, reliable and effective patient care, built on clear communication, appropriate delegation and the ability to draw upon different areas of expertise. Soon enough, the opticians weren’t just ‘a shop that sells glasses’ and the optometrist was no longer ‘someone that just does eye tests’; this outlined how each member equally contributes to a patient’s overall care.

Once adapting to an optician’s environment, I decided to delve deeper into another unfamiliar yet fascinating environment, where I pursued the opportunity to volunteer at Moorfields Eye Hospital – which exposed me

to the breadth of professionals involved in ophthalmic care, from diagnostic services and laser clinics to operating theatres. During my volunteering hours, I began to understand that, from a patient's perspective, attending to their scheduled eye surgery appointment was far more than simply undergoing the procedure and returning home; their experience began from the moment they arrived and registered, whilst carrying a sense of uncertainty about what laid ahead. I observed the different stages of their care, from being prepared by the nurses and receiving local anaesthetic, to being taken through to theatre for the procedure. Inside the theatre, I was struck by the surgeon's manual dexterity and hand–eye coordination required to perform such an intricate procedure (cataract removal) within the delicate structures of the eye. Witnessing this, made me recognise the immense level of responsibility placed on the surgeon by a patient who, despite their vulnerability, entrusted their vision to the precision of another's hands.

Seeing this journey from beginning to end, what stood out to me was the level of care that continued after surgery, where patients were given specific instructions on how to care for their eyes post-operation, alongside prescribed eye drops, with nurses thoroughly explaining their purpose and use. A volunteer's reassurance, the nurses preparation and the surgeons expertise all formed part of the same patient journey, reinforcing the same teamwork and interdependent support I witnessed at the optical practise, just on a much larger scale.
But what stuck with me most was the vulnerability of the patients themselves.

For many patients, undergoing an eye procedure was understandably daunting. As a volunteer, I took responsibility for supporting them in whichever way they needed, whether that meant explaining the procedure in clear, jargon-free language, answering questions or simply having a conversation to take their mind off any concerns. I noticed patients would often speak about their families or daily lives, teaching me to look beyond the procedure and reminding me that sometimes reassurance does not require extensive medical knowledge; simply listening and giving someone the space to talk can make an unfamiliar experience feel less overwhelming. Ultimately, effective eye care

extends beyond clinical expertise - it requires empathy, communication and an understanding of a person. Another human like myself. Like yourself. Not just a registered patient labelled on the system.

What began as an unexpected career decision on my results day has taken me for beyond the simple question of whether I could see clearly with my own eyes. What once amounted to choosing a frame and collecting glasses unfolded into an appreciation of just how much lies behind a single pair of eyes; lucky enough to have experienced both the intricate science, professionalism and clinical judgement demonstrated by the practitioner
to the vulnerability, uncertainty and trust of patients whose appointments could ultimately determine the future of their eye health. Experiencing both sides has shown me that eye care exists at the intersection of scientific precision and human connection - every clinical decision carries significance not only for a patient's vision, but for their confidence, independence and quality of life.

The future of eye care has proven highly promising, not only because of technological advancements, but because of one of the most common factors in almost every industry, the elephant in every room: AI. It was just a couple of days ago where, I watching the news, enticed by the headline: "World's first AI-assisted brain surgery patient has tumour removed." What does brain surgery have to do with eye care, you may ask?

As I looked further into the procedure, I discovered that the AI tool was developed through research involving UCL, NIHR and Google respectively, was used to advise surgeons on how to avoid significant but hidden blood vessels and nerves within the brain. Not only were the surgeons able to remove the majority of the tumour from his pituitary gland, but the procedure also led to a remarkable improvement in his field of vision.
The patient, Rhys Hibbert, described the experience stating, "When I opened my eyes after the operation it felt like I had 360-degree vision – I hadn't seen that clearly for a year." after the tumour, reportedly, had

been “pressing against his optic nerves, causing a gradual decline in his peripheral vision.”

This case of many, again, proved how amazingly interconnected the body is. Although the problem originated in the brain, it significantly affected another function we heavily rely on every day – our vision.

So yes, that Thursday might have been another random day. Yes, that Thursday was my results day. But that Thursday could also mark a day for numerous people’s cataract operation just as the one I had witnessed. Ultimately, every day is a new day. Every day is unique and different to everyone, patient or not.

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