

The Brighton and Sussex Medical School magazine

How the sounds of nature help us to relax

In this issue

- Is it time to rethink antibiotic messages?
- Working in HIV in the 80s
- The Science Festival comes to town

brighton and sussex medical school



from the Dean, Professor Malcolm Reed

As we start the new academic year at BSMS, it seems only a very short time since our summer graduation ceremony. It is always a delight to see our students celebrate their achievements after five years of hard work and to reflect on how much they have changed and developed during their time with us. I enjoy sharing their excitement and seeing how much this means to their families and supporters. We will be thinking of them, as they enter the exciting new phase of their careers as foundation doctors.

This same cohort of students completed the National Student Survey during their final year and shortly before their final exams. BSMS performed outstandingly well and achieved the top position among UK undergraduate medical schools with 99% overall satisfaction. We are very proud of this richly deserved result, which is built on the outstanding commitment, quality of teaching and experience provided by our staff and our colleagues in primary and secondary care in the NHS. This impressive achievement sits alongside our rapidly improving performance in research activity and increasing success in postgraduate education.

You may have noticed some strange scientific goings on in Brighton during early September, when the British Science Festival came to town for the first time in more than 30 years. Venues in the city and both universities hosted a plethora of exciting events, and the festival even took over the pier and New Road over the weekend. On page 14 you can read about BSMS's events, which ranged from cinema's portrayal of mental health issues and the film *Psycho*, to the artificially intelligent baby seal Paro, which helps dementia patients, and a live anatomy session.

In this issue we take a look at a fascinating oral history project that is capturing the experience of those who worked at the frontline of AIDS care back in the 1980s (page 10). These will be stored in the British Library for future generations of healthcare workers to learn from, and will give a real insight into how people responded to this new and baffling epidemic. Nicky Perry from the Clinical Trials Unit, who is coordinating the project, shares her own story as a nurse on the AIDS ward in a London hospital during this time.

We also talk to Dr Arianne Shahvisi (page 8), who researches the ethics of female genital mutilation, the concept of 'neglected tropical diseases' and alternative medicine. We hope you enjoy the read.

Best wishes,

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Celebrating graduation with the Class of 2017



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Cover story (see page 6)

Time to lose 'Complete the course' message for antibiotics

We've all been told, many times, "Make sure you complete the full course" when being prescribed antibiotics. But now researchers at BSMS are questioning that message, and suggesting that it's time it was dropped.

Professor of Infectious Diseases, Martin Llewelyn, is lead author of a paper published in the *BMJ* which argues that this message is not based on good evidence and is incorrect.

"In fact, the risk of antibiotic resistance is increased by taking antibiotics for longer than is necessary, rather than stopping them early" says Professor Llewelyn. "The 'complete the course' message has become a substantial barrier to reducing antibiotic overuse."

The history behind the message

The theory that not completing a full course of antibiotics can cause antibiotic resistance is as old as antibiotics themselves, and one that Alexander Fleming himself promoted in his 1945 Nobel prize acceptance speech, advising, "If you use penicillin, use enough."

Historically, courses of antibiotics were set by precedent, and driven by fear of undertreatment, with little concern about overuse. Early ideas about antibiotic resistance focused on the possibility that giving too little antibiotic treatment could allow infection to come back in resistant form. What we now understand about how antibiotics select for resistance tells us that the real issue for most common infections is too much antibiotic exposure.

But prescribing of antibiotic is still based on 'courses', the lengths of which are determined by the disease being treated. This ignores the fact that all patients are different and will respond differently to the same treatment. However, at present, antibiotic treatment doesn't allow for these differences.

"We need to start aiming to give individual patients the duration of antibiotic treatment they need, to optimise their treatment outcome, while minimising antibiotic use," adds Professor Llewelyn.

Why it matters

Antibiotics are key to modern healthcare, and the growing global threat of antibiotic resistance challenges the success of many medical treatments.

The World Health Organization (WHO) warns that "Without urgent action we are heading for a post-antibiotic era, in which common infections and minor injuries can once again kill." WHO has developed a global action plan on antimicrobial resistance, including antibiotic resistance, which it considers a high priority.

Every year, an estimated 25,000 people in Europe die as a result of hospital infections caused by five common resistant bacteria, which include *Escherichia coli (E.coli)* and Methicillin-resistant *Staphylococcus aureus* (MRSA).

"To tackle the massive global threat of antibiotic resistance, we need to rethink the way we prescribe and use antibiotics," says Professor Llewelyn.

"It's encouraging to see strategies being put in place to avoid unnecessary antibiotics courses being started through, among other things, point-of-care tests and use of delayed prescriptions. But we need to do more, particularly stopping antibiotics sooner when it's safe to do so.

"Although the 'complete the course' message is clear and simple to follow, it is time that we start tailoring antibiotic treatment to the individual patient. Further research is needed to find the most appropriate simple alternative message that works for the public. In some situations the right advice may be 'Stop when you feel better' but we need a lot more research in this area.

"In the meantime, we need to help the public understand that antibiotics are a precious and finite natural resource that we need to conserve. The key thing is for patients to take their antibiotics as advised by their doctor. This advice should include when treatment can safely stop and shouldn't be influenced by spurious concerns about shorter treatment risking resistance."



The science of antibacterial resistance

It is the bacteria themselves, rather than humans or animals, that become resistant to antibiotics.

Certain bacterium may develop resistance during treatment, including *Mycobacterium tuberculosis* (TB), HIV, malaria and gonorrhoea. These are known as 'professional' pathogens, and these bacteria may be transmitted during or following inadequate treatment, allowing resistant strains to spread from person to person.

However, the bacterial species posing the greatest threat today are found harmlessly in our gut, on our skin or in our environment. Antibiotic resistant species of these so-called 'opportunistic' bacteria can replace the antibiotic sensitive species when a patient is taking antibiotics for treatment of other infections. The longer these opportunistic bacteria are exposed to antibiotics, the greater the chance they will become resistant to them.

This resistance can then be easily passed to other strains of the same species of bacteria or to different species, ready to cause infection in the future, and being transmitted through the general population.



It's true – the sounds of nature really do help us relax

The gentle burbling of a brook, birdsong or the sound of the wind in the trees are well known for helping us to relax. Now a science-art collaboration at BSMS has shown how the interplay between body and mind actually makes this happen.

Researchers found that playing 'natural sounds' reduces our fight-or-flight instinct, through a series of connections between the body and the brain.

Naturalistic sounds and 'green' environments have long been linked with feelings of relaxation and wellbeing, and previous research has shown that exposure to naturalistic environmental stimuli has a positive impact on a patient's experience of general anaesthesia and their post-operative recovery, along with reduced pain and anxiety in hospice care. However, until now there has been no scientific consensus as to how this sense of relaxation comes about.

"We are all familiar with the feeling of relaxation and 'switching-off' which comes from a walk in the countryside, and now we have evidence from the brain and the body which helps us understand this effect," says Dr Cassandra Gould van Praag, Research Fellow at BSMS. "This exciting art-science collaboration has produced results which may have a real-world impact, particularly for people who are experiencing high levels of stress."



Measuring brain and body responses

Working with audio-visual artist Mark Ware, the team conducted an experiment in which participants performed a task while listening to sounds recorded from natural and artificial environments. Their brain activity was measured in an MRI scanner and tiny changes in their heart rate were recorded by monitors, to measure the effect on their autonomic nervous system – the part of the nervous system that controls the bodily functions not consciously directed, including breathing, the heartbeat and digestive processes.

Natural sounds in the experiment included waves crashing on the shore, the wind in the trees and in hedgerows, rivers and reeds and thunderstorms, while artificial sounds included the inside of a car, a hairdryer, the interior of a train and traffic.

The team found that the sounds playing in the background affected the activity in the default mode network of the brain (a collection of areas which are active when we are resting).

When listening to natural sounds, this network showed an outward-directed focus of attention, meaning participants were more relaxed. When listening to artificial sounds, there was a more inward-directed focus of attention, similar to what can be seen in people suffering from anxiety, post-traumatic stress disorder and depression.

The team compared sounds of nature with artificial sounds such as traffic Listening to natural sounds also corresponded to an increase in rest-digest or parasympathetic nervous system activity, which is linked to relaxation of the body, along with better performance in the task to monitor their attention.

Interestingly, the amount of change in nervous system activity depended on how stressed people were before going into the experiment. Those who demonstrated evidence of the greatest stress beforehand then showed the greatest increase in parasympathetic response – which helps the body relax – when listening to natural sounds. Those who were already relaxed actually showed a slight increase in sympathetic response, which is linked to stress, when listening to natural compared with artificial sounds.

Making a difference

The study of environmental exposure effects is of growing interest in physical and mental health settings, and greatly influences issues of public health and town planning. "Understanding how natural sounds affect our body and brain means we can work on creating more relaxing environments for people to live and work," says Dr Gould van Praag. "It can also feed into the development of new treatments for those suffering from conditions such as anxiety and depression."

The team are now expanding this project with Mark Ware to develop multisensory investigations into combinations of sounds, light, images, taste, touch and temperature. "Ultimately, we aim to find ways of applying the outcomes of these investigations to help people in environments where sensory monotony is an issue, or where they may feel anxious, such as hospitals," says Mark Ware, whose contribution to the collaboration was supported with public funding by Arts Council England.

Mark Ware recording 'natural' sounds



A conversation with ...

Dr Arianne Shahvisi

Tell us about your role at BSMS

I'm a Lecturer in Medical Ethics and Humanities. One half of my job is to provide ethics teaching and the other half is to conduct research within my field, which is applied philosophy. I apply abstract ideas from philosophy to real-world problems. My teaching and research focus on a similar range of topics: race, gender, class, migration, reproduction and the politics of knowledge.

How did you get involved in ethics and medical humanities?

I've taken a rather unusual route to my current position, having started my academic life as a physicist. Following a masters in astrophysics, I decided to focus on some of the more philosophical issues within physics, so I took a second masters in philosophy, then a PhD in the philosophy of

cosmology. In my first academic job in the philosophy department of the American University of Beirut I realised that the rigorous training I'd undertaken as a philosopher opened up a whole new world of problems to tackle. I had always been very political, and had a serious interest in how race, gender and class carve up the social world. I started to think of these issues through a philosophical lens and found myself particularly drawn to reproductive ethics, which led me into bioethics.

What are your particular research interests?

My research interests are now very broad, but my projects generally fall under a few themes. I'm interested in the ethics of reproduction and have projects focused on conscientious objection to abortion provision, transnational gestational surrogacy and sex selection. I also have an interest in the ethics of genital alterations such as circumcision and vulva alterations. I've critiqued UK female genital mutilation (FGM) legislation, and have written about the social and political factors which influence the practice and the various responses to it. I also have a number of projects focused on global health, including migrant health access and neglected tropical diseases.

Can you explain a bit more about a couple of the projects you're working on now?

Right now I'm working on a project which troubles the idea of 'neglected tropical diseases (NTDs)'. NTDs do not form a natural category in terms of their biological characteristics, but are instead defined operationally as diseases specific to particular regions, which have generally received less attention than seems just. As such, they are ripe for political and ethical analysis in terms of both the properties of those regions, and the reasons for this widespread oversight.

I'm interested in the way in which the term 'neglected tropical disease' relates to broader historical and political trends. First, I reject the way in which NTDs are assumed to be determined largely by climate (tropical), rather than by social and political determinants. Second, I examine the concept of neglect, arguing that the plight of regions known as 'tropical' is a wilful, rather than an accidental failure, and is therefore better characterised as dereliction. NTDs, in both their terminology and their reality, are reflections of the unprofitability of medical interventions for the poorest billion people, and a demonstration of the violation of their right to health.

I'm also working on a project which reflects on gendered patterns of alternative medicine use, which is dominated by women, both as consumers and as producers. Research indicates that this preference stems from mistrust in scientific medicine, based on negative perceptions and experiences. Yet we know that alternative medicine is

severely limited in its

therapeutic effects, therefore those choosing alternative medicine risk experiencing inadequate healthcare. This seems morally troubling, especially if neglect of women within scientific medicine is the reason for their mistrust.

My work explores women's reasons for preferring alternative medicine to scientific medicine and argues that while medicine is undoubtedly patriarchal, that's something we could improve if we were committed to making changes. However, alternative medicine does not have mechanisms which are consistent with the rest of our science, so it is vulnerable to unique forms of exploitation. I conclude that scientific medicine should be reformed to better meet the needs of women and other marginalised groups, so that they don't have to turn to alternative medicine.

How does your research affect policy and practice?

Over the past couple of years I've worked with Médecins Sans Frontières in exploring the ethics of humanitarian work, and I've advised MPs regarding conscientious objection to abortion provision. I'm hoping that my work on UK policy around FGM might influence legislation, or at least change the practices of medical practitioners. I'm currently working with clinicians on best practice with regard to FGM, and hope we can work to improve guidance to clinicians so they can avoid enacting the racism and sexism that are evident in the law. I was recently interviewed on BBC Radio Sussex regarding the ethics of anti-choice protestors intimidating women outside abortion clinics.

What would you like to work on in the future?

I've spent a good deal of time thinking about the way that the placebo effect operates conceptually, and I'd like to write up some of those thoughts. In more applied work, I'm very concerned by the treatment of migrants in Europe, and am keen to explore the ethics and politics of the way in which borders interact with vulnerable bodies.

"The best job I ever had"

It may seem unlikely, but that's the way many healthcare workers look back on working on the AIDS wards in the 1980s.

Nicky Perry was one of the nurses working at the coalface of AIDS care in the early days, and is now collecting oral histories of healthcare workers to be stored in the British Library Sound Archive for future generations to learn from.

She says it may be surprising to people how workers look back on this time. "When you talk to people who weren't there, they say, 'god that must have been awful'. But everyone we've spoken to tells us it's the best job they ever had – challenging and traumatic, but so much fun too. It's a case of having to laugh in the face of adversity – humour really kept us going, and many of the patients laughed in the face of their own adversity."

Nicky, who is Operational Manager at the Clinical Trials Unit, is working with two other HIV nurses and a team of experienced oral history interviewers to interview 60 healthcare workers who worked in the field of HIV from the early 80s through to 1996. The project is funded by the National Lottery.

"We want to capture the stories of people who worked in HIV in the early days, when there were no treatments and there was a lot of uncertainty, fear and stigma" says Nicky.

The team are conducting interviews around the UK, as the epidemic varied in different locations with different demographics. So the experience of working with intravenous drug users in Scotland was very different to working with the mostly gay and immigrant communities of London.

They are interviewing anyone who worked in health-related fields with AIDS patients, including doctors, nurses, psychiatrists and health managers. The interviews, which may take up to four hours, will be stored in their entirety. Minister of Health in Thatcher's government at the time, Norman Fowler, who was instrumental in launching the first AIDS awareness campaign, was one of the first people to be interviewed.

"We hope these histories will be put into training and education packages for healthcare workers, because it's important that they know the historical context and see how far treatment has come," says Nicky. "These records will be available forever so that if, heaven forbid, there is another epidemic in 50 or 100 years' time, people can go to the archives to learn about how we dealt with the AIDS epidemic."

Nicky's story

I worked on Thomas Macauley Ward, the HIV/AIDS ward at St Stephen's Hospital in London (now Chelsea and Westminster Hospital).

Healthcare barriers were broken down because the doctors, who usually try to 'fix things', couldn't. In fact, the nurses and those closest to the patients were the therapeutic agents who helped make those patients feel better, even though they were dying.

Princess Diana meeting a patient on the AIDS ward

It was the first time the patients were absolutely central to the decision making regarding their own treatment and death. There was no "All patients need to be sitting up in bed by 7.30am because the consultant is doing their ward round." The consultant went to see the patient when the patient was awake. It was very different to the traditional model of nursing I'd worked in before.

It was really tough at times. One set of seven nights I had 10 deaths – that has to leave some sort of lasting impact. But we supported each other and the patients supported us.

One of our roles was to help the patients plan their funerals. Parents would turn up to visit, and it might be the first time they knew their son was gay, let alone that he had AIDS. Often they would say they didn't want anything to do with their son's partner, so we really had to be family mediators.

Paramedics and other staff didn't want to come near the patients. Nurses refused to come on the ward because they didn't want to look after people with AIDS. This wouldn't be allowed to happen now, but back then there was so much fear around the disease.

Around 1996 life on the wards really changed. There were a large number of patients who thought they were going to die, then started on anti-retroviral therapy (ART) and are still alive 30 years later. HIV has gone from being a death sentence to something more manageable. Now we've got pills to prevent and treat HIV, I think the biggest killer is stigma. That's why people don't come forward for testing, and why they don't disclose to their partners that they have HIV. That's what we need to work on.

Patients and their loved ones in the early days of AIDS

If you or anyone you know worked in a health-related role with AIDS patients between 1980 and 1996, and would like to take part in the oral history project, please go to ssat.org.uk/the-aids-era-an-oral-history.html

Vending machines tackle HIV

An innovative digital vending machine that allows people to collect free HIV self-tests has been launched in the Brighton Sauna. Developers believe that this pilot will help make testing accessible for people who are at high-risk of HIV, but don't attend traditional clinical settings.

Until now most HIV testing has taken place in sexual health clinics, community organisations and primary care. However, the restricted hours, combined with a lack of anonymity, puts many people off getting tested.

The prototype vending machine dispensing free HIV self-tests was installed in the Brighton Sauna in June this year and makes tests available 24/7. In the first three weeks alone, more tests were collected from the machine than were performed in the sauna by the Terrence Higgins Trust in the preceding three months. There has been much interest in the machine, with testers leaving comments such as "a breakthrough in testing. Not just the test itself but the availability". "In order to reduce the rates of HIV infection, we need to ensure that everyone at risk is getting tested," says Dr Jaime Vera, Senior Lecturer in HIV at BSMS and HIV clinician, who helped develop the machine. "Then those who are positive can get the treatment they need. As a result, their viral load should become undetectable, meaning they will not go on to infect sexual partners.

"It is clear that the more traditional methods of testing were missing a number of people at high-risk of HIV infection, so we had to think creatively to come up with an easier and less threatening way of getting HIV testing. The vending machine allows at-risk people who were being missed by conventional services or outreach testing to access testing, and at a lower cost than these other methods."

'A breakthrough in testing. Not just the test itself but the availability'

There are plans to roll out the vending machines more widely

Reaching high-risk groups

In 2016, the team conducted a study among 281 men at the Brighton Sauna, a male sex on premise venue. They discovered that among sauna users, 32% had never been tested, and of these 44% believed they were not at risk. This was despite the fact that condom use was lower than would have been expected.

Participants said they would, however, consider self-testing via the vending machine in the sauna, with 93% prepared to try either self-testing or self-sampling.

Brighton & Hove has the highest prevalence of HIV outside of London, at 1% of the population. As 91% of people living with HIV in Brighton & Hove are men, prevalence among the male population is even greater, at 1.9%.

More than 90% of people diagnosed with HIV in the city are accessing effective treatment and as a result have an undetectable viral load, meaning they cannot infect a partner.

How it works

When a client engages with the machine by touching the screen, they are prompted to have their mobile phone to hand, and put their phone number in via the touch screen. They then receive an SMS confirmation code which they type into the vending machine to release a test. The telephone number is not stored, but the machine stores a hashed version of the number and thus has a memory of that client, allowing them to obtain further tests after a set period of time (28 days), should they require repeat testing.

Future roll out

Following the initial pilot at the Brighton Sauna, the team aims to roll this model out to four mainstream venues across Brighton & Hove, as well as the other main sauna in Hove, in order to further target at-risk populations. They also plan to make machines available for similar populations in London, Manchester and on a wider scale across the UK.

The team

Dr Vera acted as Research Lead for the grassroots HIV charity the Martin Fisher Foundation, which developed the vending machine with funding by an HIV Innovations grant from Public Health England, working with local HIV clinicians Dr Gillian Dean and Dr Suneeta Soni, designers and researchers.

The best of British Science

Personalised medicine, live anatomy and robotic seals: highlights from the 2017 British Science Festival.

Leading academics from BSMS took part in a diverse range of events when the 2017 British Science Festival came to Brighton for the first time since 1983.

More than 150 free events were held around the city and at the Universities of Sussex and Brighton, which jointly hosted the festival in September.

"The festival was a great opportunity to showcase the really exciting and important science we do in Sussex to an audience including many from Brighton and the region but also a large number of national and international visitors," says Dean of BSMS, Professor Malcolm Reed.

Professor Dame Lesley Fallowfield, Director of Sussex Health Outcomes Research and Education in Cancer (SHORE-C), gave a talk on the risks posed by treatments for breast cancer and demonstrated how the words used by medical professionals to describe cancer treatments are ambiguous and will often produce different estimates on patients' life expectancy or recovery time.

Somnath Mukhopadhyay, Professor of Paediatrics, hosted a panel discussion on the need for personalised medicine. Emma Wileman, who lost her nine-year-old son when he suffered a cardiac arrest after eating peanuts, argued that change is absolutely necessary. "We have to progress. The more we look into genes and further our understanding, the better the chance we have of individualising medicine."

Dr Harry Witchel, Discipline Leader in Physiology, showed how our bodies are constantly revealing our thoughts and behaviour through the smallest micromovements, even when we are supposedly 'doing nothing'.

Sube Banerjee, Professor of Dementia; Dr Elizabeth Ford, Lecturer in Research Methodology; and Dr Penny Dodds, Lecturer Practitioner, discussed dementia, 'the problem of the 21st century', and introduced PARO, a robotic seal that helps people with dementia, anxiety and depression.

The BSMS anatomy team, led by Dr Claire Smith, explored the human body using ultrasound scanning, non-human dissection and a range of anatomical and multimedia resources.

Natalie Edelman, NIHR Doctoral Research Fellow, transformed into Madame Natalie at Brighton Pier, where her interactive quiz determined how many sexual partners participants have had, as well as providing sexual health advice.

Services fail women with perinatal depression and anxiety

There is a shortage of adequate mental health services available to women suffering from perinatal depression and anxiety, according to a new study.

Nearly one in five women suffer from such mental health problems at some point during the perinatal period, from conception up until 12 months after the birth of the child, and this can have very serious consequences for mothers, babies and families.

Dr Elizabeth Ford, Lecturer in Research Methodology in Primary Care and Public Health at BSMS, led a review of the published research literature on perinatal depression and anxiety, revealing some worrying findings about diagnosis and treatment of these disorders. GPs and others working in primary care, including midwives and health visitors, are likely to be the first point of contact for women with these problems, but there is a serious shortage of community-based services to which women can then be referred for treatment. "It can be challenging for GPs to manage mental health problems in the perinatal period," says Dr Ford. "GPs report that current guidelines are not helpful and they prefer to use an individualised approach with perinatal women. The shortage of specialised community perinatal mental health teams means many GPs feel isolated in dealing with perinatal mental health problems. Because of the lack of appropriate services, women who would benefit most from talking therapies are instead being treated with antidepressants, which they may be reluctant to take."

Dr Ford's team suggested a number of ways to improve perinatal mental health provision. These include better GP training in perinatal mental health, identifying a GP lead within practices to liaise with midwives, health visitors and mental health services, and better funding for perinatal mental health in primary care.

Unit tackles 'ignored' and neglected tropical diseases

A new global health research unit is being established at BSMS, thanks to a £5.7 million four-year award from the National Institute of Health Research. The grant includes support for seven major projects across three often-neglected tropical diseases (NTDs): podoconiosis (podo), mycetoma and scabies.

Podo is a progressive and disabling form of leg swelling often seen in barefoot farmers, mycetoma a slow-growing, destructive infection of the skin and underlying tissues, and scabies a profoundly irritating infectious skin condition caused by tiny mites burrowing into the skin, which occurs in outbreaks in vulnerable communities. All three conditions are mostly ignored by other research groups.

"We are looking forward to applying the experience we've already developed as a cross-disciplinary research group to these highly neglected conditions, and to bringing in complementary research skills" says Professor Melanie Newport, co-Director of the new unit.

Co-director Professor Gail Davey, a pioneer in podoconiosis research, believes the unit will boost

research into the condition. "We will now be able to push forward podo research at a much greater pace. This is an exciting opportunity to work with young scientists from Ethiopia and Sudan – both countries that are heavily affected by NTDs," she adds.

The seven projects will be carried out in collaboration with three overseas partners: CDT-Africa at Addis Ababa University, Ethiopia; the Armauer Hansen Research Institute, Addis Ababa, Ethiopia; and the Mycetoma Research Centre, University of Khartoum, Sudan.

Just be patient

Sussex residents are playing their part in training our future doctors by being 'patient educators' at the medical school.

For patient educator Conway Thorns it's a matter of giving something back to the health service, after losing the sight in one eye due to giant cell arteritis. He regularly visits the medical school or a nearby hospital where medical students will examine his eyes and discuss his experience as a patient.

"I enjoy being a patient educator – I feel it is doing some good," says Conway. "If I can save someone from losing their sight in the future through a doctor remembering me and my case, then I'll have done my job. The NHS sorted me out and I'm forever grateful."

Diabetes Specialist Nurse and Patient Educator Programme Lead Anna Potts coordinates more than 60 patient educators who share their experiences and time with students and the medical school in a variety of ways.

"Our patient educators are a fantastic group of people who really enhance learning for our students," Anna says. "They provide a narrative about living with a condition and the day-to-day challenges that can bring. By learning from patient educators, students can start to apply their theoretical knowledge to real scenarios and people. This helps them develop an understanding of patient-centred care, and improves their professional skills and knowledge."

Patient educators might be patients or carers of patients with chronic conditions, or those who have had experiences of being a service user such as visiting A&E.

They might take part in a symposium, such as sharing their experiences of living with chronic conditions or by providing useful insights into their encounters with healthcare professionals within the NHS. This helps students to develop their communication skills and strategies to improve the consultation process for their future practice.

Other activities patients may be involved with include being examined by students, helping with student assessments and participating in open days. They will also soon be part of the interview panel for student selection at BSMS.

Learning directly from patients clearly has an impact on the medical students. "It has been useful to see the human cost of the diseases we learn about from real patients," says second-year student Hadis Reyhani. "This helps us appreciate the need to treat them and their families with compassion and kindness."

"When patients recount their symptoms, journey to diagnosis and treatment/after-care, it's helpful to see the ways in which their care could have been improved. We can then learn from any mistakes that dampened the care experience for these patients, and make sure we incorporate what we've learned into better care for future patients.

"I'd never really thought about the patient behind the disease, and never truly distinguished disease from illness, so being exposed to patients' views in depth has made me much more aware of the need to address the emotions of the patient along with their physical symptoms and disease," Hadis adds.

Anna is now working with the curriculum team and the patient educator group to develop the programme further. "We'd like to identify new and innovative ways to utilise our patients and carers within the undergraduate curriculum, to really expand on and enrich the learning opportunities that we give our students. We are always looking for new patient educators who may wish to volunteer to join us."

Patient educator Stella Benson was seriously ill with sepsis six years ago, losing her legs below the knees along with her fingers and thumbs.

Medical students examine Conway Thorns's eyes

"I can help students because I've been through sepsis and come out alive. I have something to offer, especially as someone who isn't currently a patient but has been through it," says Stella. "I'm happy to share my experience and answer any questions they might have.

"Having sepsis and undergoing amputation was incredibly traumatic. I know doctors have to look at a patient as a body, but they also need to talk to them and relate to them. So don't talk about me, in front of me, as 'her'. I may be a fascinating case of amputation, but I am also a human. It's important that students gain some understanding of patients' feelings, which is a big part of why I'm sharing my story with them," she says.

If you or anyone you know would like to participate as a patient educator at BSMS, please contact peg@bsms.ac.uk. Find out more at **bsms.ac.uk/peg**

News

BSMS top medical school

Students have put BSMS in first position for medical schools in the National Student Survey. The quality of teaching was rated extremely highly, with 100% of participants agreeing that the course is intellectually stimulating and that they have been provided with opportunities to apply what they have learnt.

In addition, 98% agreed that staff are good at explaining things and have made the subject interesting. Dr Juliet Wright, Director of Undergraduate Teaching and Learning at BSMS, says: "Our staff are committed to providing students with an outstanding education in medicine, and the particularly high scores for teaching show we have been successful in achieving this. Results of 100% for the quality of the course and opportunities for students to apply what they have learnt show that we are clearly preparing our students well for their future careers in the NHS."

Research news

- Dr Mei Trueba has received funding from the University of Brighton Rising Stars Initiative to explore the relationship between commodity prices and occupational health injuries among Bolivian cooperative miners.
- Dr Jessica Eccles has been awarded a grant from the Academy of Medical Sciences for her project exploring brain mechanisms that link joint hypermobility to anxiety.
- Dr Sandra Sacre has been awarded funds by the Research Development Fund to explore the link between chemotherapy treatment for breast cancer and cognitive impairment.
- The Breast Cancer Research Foundation is funding Professor Fallowfield and colleagues' studies into the impact of various interventions on the stress levels of women with breast cancer. The funding will also enable the evaluation of SHORE-C's new educational programme to help oncologists discuss genomic test results with patients regarding the risk of cancer recurrence.
- A new programme has been launched to help low and middle income countries with the growing number of people with dementia. Professor Sube Banerjee is one of the researchers involved in the strengthening responses to dementia in developing countries (STRIDE) programme, which is funded by the Research Councils UK's Global Challenges Research Fund.

School and student news

- BSMS has been awarded
 15 additional medical student
 places from 2018/19, taking its
 total home and EU student intake
 from 128 to 143 students per year.
- Martin Llewelyn, Professor in Infectious Diseases, has been elected as vice-president (president elect) of the British Infection Association.
- Year 4 student Alexander Langrish won the 'Undergraduate Prize' for his presentation on a teaching toolkit for pre-exposure prophylaxis at the British Association for Sexual Health and HIV and Society for the Study of Sexually Transmitted Diseases in Ireland Annual Conference.
- James Goodworth, a fourth-year student studying the Global Health MSc at BSMS, was awarded £2,000 from the University of Brighton's Santander Travel Award to collect primary data in Bogota, Colombia, for his master dissertation.
- Tewodros Tariku, a PhD student working on podo genetics with the Global Health and Infection team, has successfully submitted his association paper for the annual American Society of Human Genetics meeting and has been awarded a travel grant to present his work.
- Fourth-year student Willie Henri Quah has completed a research attachment at the LKC School of Medicine in Singapore, exploring healthcare professionals' perspectives of Smartphone ophthalmoscopy for patients in the community.

Events

Celebrating success of dementia programme

More than 320 health students joined 90 families affected by dementia and dementia specialists at a stakeholder conference in May to celebrate the Time for Dementia project, which pairs health students with families affected by dementia. The pioneering programme has won several major health awards.

End is in sight in battle with HIV

We are closer than ever before to ending the HIV epidemic, said a panel of experts at 'HIV: is victory in sight?' at the Brighton Festival in May 2017. The panel discussed two major successes that mean the transmission of HIV is greatly reduced. In Brighton & Hove more than 90% of people diagnosed with HIV are accessing effective treatment and as a result have an undetectable viral load, meaning they cannot infect a partner. Combined with the successful development of pre-exposure prophylaxis (PrEP), this means people who are HIV negative have a far lower risk of being infected with the virus.

Caring for the Carers

BSMS hosted the Sussex Caring for the Carers conference to celebrate Carers Week in June. The conference invited local researchers to share their work to support carers who care for people with a wide range of conditions.

Mind the gap: how to solve Britain's social mobility problem

Join us for a thought-provoking lecture 'Mind the gap: how to solve Britain's social mobility problem' with Rt Hon Alan Milburn, Chair of the Social Mobility Commission.

Wednesday 1 November 6.30pm Brighton and Sussex Medical School Book your free ticket: bit.ly/AlanMilburn

- → A child living in one of England's most disadvantaged areas is 27 times more likely to go to an inadequate school than a child in the most advantaged
- → Young people from low-income homes with similar GCSEs to their better-off classmates are one third more likely to drop out of education at 16 and 30% less likely to study A-levels that could get them into a top university

→ Only 4% of doctors, 6% of barristers and 11% of journalists are from working-class backgrounds

Facts from: State of the Nation report on social mobility in Great Britain, 2016

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