

SPECIAL ANNIVERSARY ISSUE MARKING 20 YEARS OF BSMS

CONTENTS

BSMS timeline

Take a visual tour of key BSMS moments over the past 20 years

Events and staff spotlight

Key events in our anniversary year and profiles of current and former staff who have shaped BSMS

Past meets present

Current BSMS student Evie meets BSMS alum Sophie, who graduated in BSMS' first cohort

A conversation with Prof Mahmood Bhutta On a mission to make healthcare more sustainable

Time for Dementia 10 years on How the workforce is benefitting from this unique dementia education

60 seconds with Profs Andrea and Chris Pepper How their research is helping to find the right drugs for the right patients

One size does not fit all A personalised approach to treatment for children's asthma and allergy care

A conversation with Dr Jessica Eccles The neuroscientist who has helped launch the world's first neurodivergent brain body clinic

Getting creative with genomic medicine The collection of poems written by families affected by rare disease

Clinical trials and health partnerships Meet the teams working to improve health outcomes through collaborative research

What makes policy?

Gem Aellah reflects on her social sciences research for the 5S Foundation

Using VR for difficult conversations The pioneering initiative helping doctors in navigating difficult conversations

23

Low field MRI The new scanner aiming to 're

The new scanner aiming to 'revolutionise healthcare'





I was absolutely delighted to be appointed the second Dean of BSMS commencing the role in December 2014 and seeing the school through most of its second decade. BSMS has established an excellent reputation and this has grown as we have been through a major increase in the numbers of undergraduate and postgraduate students, along with the associated increase in staff numbers in the school. The essential values of BSMS were summarised recently in a letter I received from one of our 2023 graduates, who wrote:

"I just wanted to express how well BSMS has prepared me (for Foundation Year I). I had a wonderful five years in Brighton and from my first day I felt hugely supported and most importantly, treated like an adult. I also feel extremely grateful for the rich life I had at BSMS and hope that BSMS retains its personal atmosphere as more students join – being able to pop into student advice and see a familiar face was a real asset to BSMS and what makes it stand out from other medical schools."

I feel confident that this ethos can be maintained throughout the third decade of BSMS as we face the opportunity to grow further to work with our NHS partners to meet the ambitious challenge of the NHS Long Term Workforce Plan.

Professor Malcolm Reed Dean of Brighton and Sussex Medical School



It gives me great pleasure to congratulate BSMS on its 20th anniversary. This important partnership between the Universities of Sussex and Brighton and the NHS has made a hugely significant impact on the health and well-being of the population of the city, the region, and the wider world, with 2,000 doctors already trained and hundreds more currently on that journey.

BSMS can be especially proud of its excellence in teaching and learning, with strong performance in the National Student Survey over many years and a track record of innovation, such as the ground-breaking work with Channel Four last year in creating the documentary, *My Dead Body* – a truly poignant story of life, death and body donation.

Powerful research collaborations are leading to significant progress in the development of healthcare practices in the Global South, new treatments for neurodegenerative diseases, and incredible clinical insights in neuroscience.

I look forward to supporting BSMS to grow its student body and its research in the coming years, and I have no doubt that the school, will continue to flourish.

Professor Sasha Roseneil Vice Chancellor of the University of Sussex



It should not be underestimated what a significant achievement it is for BSMS to have reached this milestone. Today, strongly supported by both its parent universities, BSMS is one of the most successful, popular and highly rated medical schools in the country.

Staff and students at the University of Brighton have benefited hugely from the addition of the teaching and research of BSMS to our portfolio, with new and evolving opportunities for interdisciplinary collaboration across the fields of medicine and health.

The research, the science and the public expectations that underpin good medical practice have evolved rapidly over the last two decades – meaning the need to adapt, to change practice and to collaborate have become ever more important.

Looking forward to the next twenty years, there is an exciting opportunity to work collaboratively with our partners to define new forms of interprofessional practice and new health roles.

Professor Debra Humphris Vice Chancellor of the University of Brighton



It's extraordinary now to think back to the beginning of the school. We had about 15 months before the first students turned up – and everything to do. There were just four of us – two academic colleagues (Richard Vincent and John Kay), and Peter Dennis, who has steered the school from the very beginning. We had to plan the curriculum, build the buildings, recruit the staff ... and choose the colours for the academic gowns!

The school was officially opened by John Reid, then the Secretary of State for Health, and then we were off, often managing to keep just a few weeks ahead of the students. It was an incredibly exciting time - if sometimes rather stressful – but we were so lucky with our wonderful staff who were absolutely committed to delivering a great experience for the students. The graduation of the first cohort was a very special day for everyone. Over the past 20 years BSMS has firmly established itself as one of the most popular and successful medical schools. It was a huge privilege to be involved from the beginning, and it is a huge pleasure to see the school's ongoing success.

Professor Jon Cohen

Founding Dean and Emeritus Professor of Infectious Diseases, BSMS

2000



2000 The government recognises the need for more doctors, particularly in certain areas of the UK, including Sussex.

2001 The Universities of Brighton and Sussex successfully submit a joint bid to build a medical school. Building work begins on the Medical Teaching Building.

2003 The Secretary of State for Health, Dr John Reid, officially opens BSMS on Wednesday 15 October 2003. 135 students are in the first cohort who learn in the newly built Medical Teaching Building. 2004 The new four-storey Medical Research Building opens, housing five research laboratories including a unit for work on microbial research, a tissue culture facility, an image analysis and microscopy suite, together with other laboratory facilities.

2023 The Brighton and Sussex Clinical Trials Unit is awarded full registration to conduct clinical trials.

2022 The new Health Research Partnership, an exciting initiative bringing together academic and NHS partners across Sussex, launches. **2021** BSMS becomes the first medical school to declare a climate emergency and co-signs the joint medical schools' declaration.

BSMS TIMELINE

2020 The BSMS virtual work experience platform becomes in demand worldwide due to Covid-19. The platform is nominated for and wins several awards.





2005 The Audrey Emerton Building, a new base for third to fifth-year students, is opened by Baroness Emerton. It contains a 150seat lecture theatre, teaching and seminar rooms, a clinical skills room and a library.

2007 The new Clinical Imaging Sciences Centre (CISC) opens. The centre houses an integrated Positron Emission Tomography Computed Tomography (PET-CT) imaging system and a 1.5T Magnetic Resonance (MR) imager.

OF KEY EVENTS

2008 After five years of early morning lectures, afternoons in the dissection room, writing up portfolios and joining ward rounds at hospitals around Sussex, the first cohort of BSMS students graduate.



2013 BSMS celebrates its 10th birthday with a series of celebrations, titled 'BSMS10'.

2019 The Dissection Suite is given a public display licence to host events, residencies and more for a wider audience. The licence means that the Anatomy team are now able to permit the public display of consented human tissue. 2018 April BSMS is awarded an additional 50 undergraduate students per year, taking the total number to just over 200 per year. May The school is recognised for its commitment to gender equality by achieving the Silver Award as part of the Athena SWAN Charter. July BSMS holds its first ever reunion event to mark 10 years since the first cohort graduated. 2016 CAPSULE, the quiz-based learning resource designed to support undergraduate medical students in the application of medical knowledge in the clinical setting, is launched with great success. 2014 BSMS becomes one of just five Wellcome Trust Centres in the UK. The Wellcome Trust Brighton and Sussex Centre for Global Health Research, a partnership between BSMS and institutes in Ethiopia, Cameroon and Sudan, promotes interdisciplinary research and supports researchers working in public health and tropical medicine.



We are celebrating our 20th anniversary with a year of events to commemorate our past, present and future. Here are just a few of our events planned for the year.



Further details about all our events for the forthcoming year of celebrations will be made available on our BSMS20 events webpage. Scan the QR code left. Pro Bh lec

Professor Mahmood Bhutta's inaugural lecture

BSMS20 officially kicked off with Prof Mahmood Bhutta's inaugural lecture 'Surgery: Time for an inclusive and sustainable future?' on Wednesday 4 October. Staff, students, alumni and friends of BSMS joined the launch of this exciting year of celebrations.



STAFF SPOTLIGHT

6



Sube Banerjee Honorary Visiting Professor Sube is an old age psychiatrist and epidemiologist, working in applied health research and health and care policy in dementia.

G I learned an immense amount at BSMS, including that education, like research, is about innovation and evaluation to enable translation of novel and best practice. Unlike research, it is the reason why most students come to us so there is an absolute necessity to do it brilliantly and generate positive student experience. BSMS does just that."



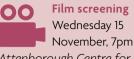
Peter Dennis Medical School Secretary Peter helped establish BSMS. He is responsible to the Dean for the overall operation of the school, its interface with NHS partners and parent universities and for provision of senior level advice on policy, procedure and practice.

I was on secondment in the Vice-Chancellor's Office at the University of Sussex when the opportunity to establish a new medical school came along. Having worked previously in a medical school, the NHS, and the University of Brighton, I was in the right place at the right time. I helped to put the initial bid for BSMS together and supported making the whole thing a reality."

UPCOMING EVENTS UPCOMING INAUGURALS

How do you make a doctor? **BSMS** Welcome Lecture and Dinner Thursday 2 November, 6:30pm Chowen Lecture Theatre

Dr Sophie Harrison started at BSMS in 2003, the same year that the medical school opened. We are delighted to welcome her back in the school's 20th anniversary year to discuss her unconventional career path and what exactly it takes to make a doctor. Sophie works as a GP in Cambridge. Her book The Cure for Good Intentions was a BBC Radio 4 Book of the Week in 2023.



Attenborough Centre for the Creative Arts (ACCA), University of Sussex

A special partnership with Brighton Cine City Film Festival and the Attenborough Centre for Creative Arts (ACCA) in screening the UK premiere of Farah (Hassiba Freiha, Kenton Oxley, Lebanon, 2022). Following the screening Professor Bobbie Farsides will be in conversation with directors Hassiba Freiha and Kenton Oxley.



Artist Judith Alder will be taking over hidden corners of the BSMS Medical Teaching Building to display an exciting range of work from her New Immortals project. In 2016, Judith worked with fellow artists and colleagues from BSMS to create the art that formed the original project. We are delighted to be hosting it again in this special anniversary year.

From despair to hope: The past, present and future of HIV medicine **Professor Jaime Vera** 22 November, 6:30pm

Improving neonatal care: Ancient ideas revisited

Professor Heike Rabe 21 February, 6:30pm

Professor Mike Okorie 20 March, 6:30pm

Professor Simon Waddell 8 May, 6:30pm

Professor Stephen Bremner 5 June, 6:30pm



Bobbie Farsides Professor of Clinical and **Biomedical Ethics**

Bobbie has been involved in developing the field of bioethics for over 30 years. Since joining BSMS in 2006, she has expanded her activities in relation to global health issues, supervised doctoral projects and offered mentorship and support to junior colleagues.

At first, I loved the small size of the medical school and the fact that you could more or less know everyone. As time has gone on, I have valued the increasingly vibrant and varied students we attract, and I really appreciate my colleagues, both in our amazing Ethics team and more widely."



Liz Kaye Former Quality and **Placements Manager**

Liz joined BSMS in 2006 as the administrator for Phase 2. She was responsible for supporting, in some way or other, every undergraduate student at BSMS up until 2022-23.

It's okay to be yourself and follow your own dreams, not what others think you should or could do. Just because you can, doesn't mean you should. Sometimes things fall into place, but if they don't then it's up to you to make the right things happen."



Professor Di Lawrence-Watt Former Head of Anatomy Di joined BSMS at the beginning of 2003 when the medical school opened. She was the first Head of Anatomy, wrote the anatomy and embryology curriculum and set up the dissecting room.

My favourite memory has to be proudly watching the first intake of BSMS students at their graduation. They put their trust in us – a new and untried medical school, and they did us proud."



Jon Mason Student Welfare Adviser Jon joined BSMS' team of welfare advisers in 2009, having previously worked in student welfare roles at both Brighton and Sussex Universities.

As soon as I arrived, I was bowled over by the encouragement to contribute ideas and shape school life. Not only has this allowed me to feel I'm really making a difference, it's stretched me and let me develop lots of other skills."



Scan the QR code for the full interviews.

7

Current BSMS student Evie O'Rourke, Year 5, interviews alumna, Dr Sophie Harrison, who was in the first cohort of students at BSMS who graduated in 2008, about her memories and career to date.

PAST NEETS **PRESENT**





Top: Dr Sophie Harrison Bottom: Evie O'Rourke

Evie: Why did you choose BSMS? Sophie: It would be nice to give you a poetic and inventive answer, but the truth is it was near London. It was commutable, so I thought I was going to commute and keep hold of my flat. And I'd lived in Brighton during the summer before and felt I knew the town.

Evie: What was it like joining a brand-new medical school? Sophie: When I came to the Open Day, half the medical school wasn't there and it was mostly just steps. So, it sort of unrolled in front of us. It was less competitive than it is now and other medical schools were much more established than BSMS at that time. It had a genuinely mixed cohort because it took loads of different students, including access to medicine, people who didn't have A-Levels and others who had come from different routes, which was cool.

Evie: Can you set the scene of what it was like to be a student in BSMS then? Sophie: We just filled the lecture theatre. It was brand new and just had that new carpet smell! But to set the scene for you, this was just the beginning of smartphones, but people were tapping on Blackberries with little Styluses if they were super up to date with tech. Others brought massive brick-like laptops, so it feels pretty vintage looking back. Even those at the Universities of Brighton and Sussex and in the hospitals seemed surprised to see us. But that was fine, because we were surprised to see them as well, because we were all new.

Evie: What was the course like in 2003? **Sophie**: I suspect the kind of structure probably hasn't changed too much in terms of the theory and lectures at the beginning. We were on one day a week for our 'long studies' as we called them where you followed people. And we had placement right from the beginning. Then the course slowly became more placement-based and less lecturebased. I remember I found lectures quite challenging because it was so much information in such a compacted amount of time, yet it was quite a lot of time to sit still for. And I wasn't usually used to sitting in a classroom because

I'd been at work for six or seven years by then. I wrote in hundreds of notebooks, although I'm not quite sure why as none of the information in the notebook seems to be in my head now!

Evie: How did you find the transition from working full-time to being in medical school?

Sophie: At the beginning, it was so bizarre and so surreal because everything was so new. And it really helped that the whole school was brand new as well. By the second year the transition did feel quite difficult, particularly being very broke and also being cut off from my old world quite a lot. I found the medical world quite a strange place because I'd been a journalist and editor before.

Evie: And how did you find being on placement?

Sophie: It's a culture, isn't it? And the thing I missed originally was irony, because if you say something, you mean it on the whole, whereas in publishing, half the time you say something, you are kind of joking. I remember I said to a consultant 'oh, you know, he's having about a billion inhalers a week'. And he was like 'what?' I said, 'you know, he's having about 15 inhalers a week'. And he was like, 'what?'. I hadn't meant literally, but everything was literal. That probably sounds a bit of a ridiculous thing to have noticed, but it was one of the things I really noticed. In journalism, you're always probing around for other meanings, but this was a world in which people largely said exactly what they meant, which also can come across as quite blunt.

Evie: What are some of the good moments you had on placement? Sophie: I had some lovely placements. I think it's a tendency in books to write about things that are more entertaining, perhaps, which tend to be less great overall. I had a brilliant time on cardio. We had this quite ancient cardiologist who was terrific because he was having so much fun at work. One of those people who never really seems any older because they're so lit up by what they're doing. And he loved sharing it. He loved teaching as well. I also remember doing a Student-Selected Component in Hayward's Heath on the hand, which didn't sound particularly interesting unless you're very interested in hands. But it turned out to be brilliant as the hand surgeons just so enjoyed what they were doing, weren't worried what anyone thought, weren't grotesquely overworked and just enjoyed themselves.

Evie: What influenced you to be a GP? Sophie: I love the fact it's people in their own clothes and their own houses, which sort of makes it a bit more equal. It's not quite as it is in hospital, it's very much more your kingdom and people come to visit you. GP feels more level and I enjoy people. People are really at the front of it. rather than the more technical side of medicine. But it's also really challenging in an interesting way. It's challenging clinically because it's the only bit of medicine where you've got a completely undifferentiated population rocking up and you've got very little to work out what's going on. You must use your basic clinical skills a lot and I find that intellectually interesting because it is continuous problem solving and feels quite fresh.

I like the relationships through time as well. One of the most valuable things you have as a GP is knowing the bit they can't measure, which is that you know the person. You do build a relationship, and that's part of your diagnostic toolkit. It's super nice watching people get better. And honestly, they do generally get better.

I didn't come from a science background, so I probably wasn't going to end up in pathology etc, because that wasn't my strength. And because I'm a GP partner now, I have more influence, so if something strikes you as absurd, you can do something about changing it and devise ways of doing things that work better. I find that really satisfying because I used to be in a hospital in Foundation Year 2 (F2), just thinking why are we doing this, this is really inefficient or really difficult for the patient to deal with. But now I can do things about that and that feels worthwhile. **Evie:** Whenever I go to GP placements, I struggle with the thought of being in a room by myself most of the time. What is it like to be in a room on your own as a GP?

Sophie: I think it's a really good point because it was the thing that put me off it as a job because I just thought that looks so lonely and sad and weird and I don't like myself enough to spend a whole day alone.

But I've never been in a practice where we're not all in and out of each other's rooms. I am in and out all day with my colleagues. Who are you going to tell when you can't work out what the rash is for example? I'm 20 years in, I still struggle with an occasional ECG and need my colleagues to help.

The other thing is you can make your room quite nice! I live in a plant universe at the moment.

Evie: What advice would you give to us current BSMS students about making the most out of our time here and thinking about the future? Sophie: I think it is very stressful at points, but I think try and get as much fun out of it as you can. There are so many opportunities for fun, there are so many weird and interesting situations you'll find yourself in that you'll never get anywhere else. And although there are a lot of things to worry about, or ways in which you can become worried by it, fundamentally just try to find the joy, because I think there is quite a lot to joy in it.

Also, keep hold of your forks and your spoons at all times. The NHS is very unfriendly to cutlery. And you don't want to be eating off a spatula or your yoghurt with a tongue depressor. That's my top tip.

Dr Sophie Harrison is the author of The Cure for Good Intentions. She will be returning to BSMS on 2 November 2023 for a special talk about her book, career to date and more. Book your place at **bsms.ac.uk/events**.

Evie O'Rourke hosts a regular podcast where she talks to doctors about their careers. Find it on Spotify by searching for Past Medical History.

A CONVERSATION WITH PROFESSOR MAHMOOD BHUTTA



What is your role at BSMS?

I am Chair in ENT, and my particular areas of research include how we can make healthcare more sustainable in terms of both its environmental impact and labour rights in health care supply chains. Alongside that I do research into global ear disease and hearing loss. I am also an ENT surgeon at University Hospitals Sussex NHS Foundation Trust, specialising in the ear.

In terms of sustainable healthcare, I'm particularly interested in the current linear economy model for medical goods, where we've ended up in a situation where a lot of things that we use in healthcare are thrown away rather than being reused. My research looks at what has led to that situation and how we can reverse it. This includes perceptions around infection risk, the lack of infrastructure we have to enable reuse, the incorrect economic models that compartmentalise cost rather than look at the costs of the whole system, as well as behaviour change.

What got you interested in this area of research?

I was always interested in issues around climate change and labour rights. What really brought that to the fore was when as a trainee surgeon in 2006, I visited Sialkot, my parents' hometown in northern Pakistan. Sialkot produces around 70% of all the world's surgical instruments, and my cousin took me to see the factories where these were made.

What I saw shocked me. It was sweatshop labour; children as young as seven working on grinding machines making products for the NHS. This started me questioning the production process for our goods. We've since discovered many other problems with the supply chain, including the production of gloves with forced labour in Malaysia, and PPE production in China. Even back then I was also concerned about the environmental harms of medical care.

What are you currently working on?

Dr Chantelle Rizan, Clinical Lecturer in Sustainable Healthcare in my team, has carbon footprinted many of the medical products that we use, and we've clearly demonstrated that re-use is the way forward to help save our planet.

Aligned with that we need to understand what the barriers are to re-using medical products so I'm working with professors of infection control to get some understanding of this, and have been asked to join the Clinical Advisory Board of Greener NHS to help implement national policy. I am also chairing a national report into sustainable surgery that will lay out the way out for sustainable surgery, which will be released in November.

What do you enjoy about your research?

What I find rewarding is knowing that people feel the same regarding the global supply chain, they are frustrated and are on board that we need to change these things. So that gives me hope that change will happen, and that it's just a question of how and when. What is frustrating is the how: how do we get over these entrenched ways and mechanisms of doing things and move from talking about it to action?

What are the main barriers to effecting change?

It comes down to making changes easy – and that is not always the case. If we want to improve worker rights, it's very hard to do that when we are trying to buy so many goods and we want the cheapest possible price for everything. These economic models we've created are very difficult to overcome. If I want to reuse something the infrastructure doesn't exist for me to do so. On top of these barriers, we also have to challenge the lack of evidence around things like infection control, meaning that people will throw things away rather than consider reusing them, for fear of infection risk.

For example, laryngoscope blades are pieces of metal we put in someone's mouth to examine their throat inserting a tube to anaesthetise them. We use around 3 million a year in the NHS and they're all thrown away because they are considered a potential infection risk. We could just clean those after using them, the same as we do with a spoon. So if we're going to throw those away, why do we use spoons in a canteen and not throw those away? It's exactly the same thing.

What difference do you think your research might it make?

I hope it leads to many advantages to both the NHS, and the planet. If we move to an economy where just about everything possible is reused, what are the potential advantages? Firstly, we're going to reduce our resource use and that will reduce our environmental impact in many different ways. All our evidence to date shows that we're going to save money, so I think we're going to save the NHS millions of pounds every single year. In addition, we're going to build resilience into our supply chains because if we've got the goods we need within our system, we don't need to rely on outside sources.

On top of that I hope that we embed a culture where medical goods we buy have to be protecting worker rights. There's been some good progress on that recently – this year the government public procurement notices included medical goods for the first time as a high risk category, specifically mentioning gloves from Malaysia as something to consider.

Where do you hope to take your research in the future?

Sustainability in healthcare is still a relatively new field and I'm glad there is so much enthusiasm and interest in it. I want to train others so they understand what they're doing and feel emboldened to make the changes themselves. One of the things I'm very excited about is our new Postgraduate Certificate in Sustainable Healthcare, which will help build the leaders of the future.

TIME FOR DEMENTIA 10 YEARS ON

Above: Bert Williams, speaking at the annual Time for Dementia conference, with his wife Shirley

Below: Dr Stephanie Daley, Reader in Mental Health & Dementia at BSMS



groundbreaking programme to help healthcare students gain greater understanding of what it is like to live with dementia marks its tenth anniversary this coming year. Time for Dementia (TfD) was launched at BSMS in 2014, with the aim to prepare the future NHS workforce with the knowledge, attitudes, and empathy needed to provide high quality, and compassionate care to people with dementia and their families. Since then, the programme has expanded across the South of England, and more than 8,000 students and 2,100 families have taken part.

At BSMS, Year 2 healthcare students are paired with a family affected by dementia, visiting them six times over two years and getting to know the person with dementia and their carers over time.

Our research has shown both students and participating families gain from the experience. Students reported an increased understanding of the impact of dementia on families, while families found the social interaction and a sense of value from their contribution important.

BSMS has led the expansion of TfD across the South of England, and the programme is now delivered across ten different training programmes at eight universities. The programme has been delivered to students on courses including Nursing, Occupational Therapy, Physiotherapy, Radiography, Paramedic Practice and Dietetics.

Southampton Medical School, University of Chichester, and University of West of England all started delivering the programme in September 2023.

"Time for Dementia is a real game-changer in terms of dementia education for the future workforce," says Dr Stephanie Daley, Reader in Mental Health and Dementia at BSMS. "We are thrilled to support its expansion and hope that it will become the 'go to' model of dementia education for all healthcare professionals in training." Born in Guyana, Shirley Williams came to England in 1961 at 19 years of age to train as a nurse at Brighton General Hospital, later training in midwifery and going on to have a successful career in healthcare. In 2017, she was diagnosed with Alzheimer's after her children noticed her repeating herself. Shirley is now cared for by Bert, her husband of over 57 years, with support from their two children, Joanne and Mark. Shirley got involved in the Time for Dementia programme through her Alzheimer's support group. She wanted "to give something back" while she still could.

Shirley receives personalised attention from the students," says Bert. "They can witness firsthand the impact of memory loss, communication difficulties and daily struggles, and can see the effect that Alzheimer's has on both the individual and the carer. They actively listen to her experiences and challenges with Alzheimer's. The genuine interest and compassion shown by the students make Shirley feel heard and valued."

Shirley and Bert Williams *Time for Dementia family* "Time for Dementia is a real game-changer in terms of dementia education for the future workforce."

It was such a privilege being able to see the family over time. You're more likely to remember signs and symptoms if you've seen a real person, rather than just reading sentences in a textbook. I think that's why I was so passionate about the Time for Dementia programme, and I've mentioned it quite a lot to my students when we've talked about dementia – because you really do need to see people living with conditions to fully appreciate how it affects them and how it can affect your practice as a clinician as well."

Dr Miriam Miller was involved as a BSMS student in the first year of TfD. She now teaches at Portsmouth University and is about to start psychiatry training. I got involved with Time for Dementia in 2021 and it has been an amazing two years. I have had the chance to interact with and learn not just from the individual but also from their family, helping boost my confidence in working with people with dementia. Throughout medical school we learn about the science behind the disease, but Time for Dementia provides a first-hand experience – especially for those who have had little interaction with individuals with dementia and their caregivers."

Harriet Kwartemaa BSMS student



Empowering education and research

Hardship grants make a difference at Brighton and Sussex Medical School

Thanks to gifts from our supporters, BSMS provides additional support for students facing adversity through its dedicated hardship funds. Understanding that financial struggles can impact their academic pursuits, BSMS offers a lifeline to those in need. Hardship grants not only ease financial burdens but also convey the school's commitment to nurturing talent irrespective of circumstances.

By providing vital grants, BSMS ensures

that aspiring medical professionals can focus on their studies and clinical training and research without the weight of financial worries. In this way, BSMS transforms obstacles into opportunities, embodying the spirit of solidarity and fostering success in the face of hardship.

You too can support education and research at BSMS by making a gift at: supportsussex.hubbub.net/p/ bsmshardship.

GOVERNMENT OF CONTRACT OF CON



Meet **Professor Andrea Pepper**, Joint Head of Department of Clinical and Experimental Medicine and Chair in Cancer Biology, and **Professor Chris Pepper**, RM Phillips Chair in Experimental Medicine at BSMS.

BSMS is turning 20 this year, can you tell us a little bit about blood cancers (haemato-oncology) and the advances in treatment in the past two decades? Blood cancers are a very diverse group of diseases that arise when something goes wrong with one of the many types of cells found in blood. The malignant cells are often immature and always dysfunctional so they cannot perform their normal tasks and as a result patients often suffer from anaemia, bruising and repeat infections. The different types of blood cancers form a large spectrum of diseases including acute and chronic leukaemias, lymphomas and myeloma. There are many other diseases that also fall into the blood cancer category and even within each category, there is also a huge spectrum of different sub-groups of the disorder. As a result, finding diseasespecific therapies that can be 'applied to all' has proven to be impossible. In the last 20 years, research has yielded some fantastic new treatments; bone marrow transplantation strategies and novel drugs that work for some patients. Indeed, in some cases patients have been cured and some, although not cured, can have their disease stabilised for a long period of time. For many, but not all, life quality and expectancy has dramatically improved in the last 20 years. However, finding an effective treatment is usually by 'trial and error' and sadly, for many patients, is not yet possible.

Your research is about trying to find the right drugs for the right patients. what does this mean for the future of blood cancer treatment and where is your research focused at the moment? A key part of our research is about trying to identify the best drugs for each individual patient. To do this we collect blood samples from patients and test how their cancer cells respond to drugs in the laboratory. At the same time, we measure the expression of some key proteins in their cells and establish whether the level of these proteins can predict the response to individual drugs. The proteins we are looking at include those that prevent tumour cells from dying (anti-apoptotic proteins) and those that are transcription factors and drive proliferation and drug resistance (NF-kB family of proteins).

How does collaboration extend outside of BSMS in your work to identify novel therapeutic targets and ultimately improve patient prognosis and treatment?

We strongly believe that collaborations are the key to successful research and are fortunate to have some amazing collaborators. As well as collaborating with scientists in both our parent universities, Sussex and Brighton, and the clinical teams at University Hospitals Sussex NHS Trust, we also have collaborators all over the UK and in Italy, Germany and the US.

What excites you most about the advancements in blood cancer treatment and possibilities in the future?

For us, the most exciting prospect is finding a way to determine what drug will be best to treat every individual patient's disease. By determining this we will be able to prevent patients from having the stress and soul-destroying experience of drug treatments that simply don't work for them. We hope that by combining mathematical modelling with laboratory experiments, we will be able to reliably predict how an individual patient's cancer cells respond to drugs. If we succeed, patients won't have to deal with the side effects and disappointment of failed therapies in the future.



Above: Professor Somnath Mukhopadhyay in clinic with a medical student and patient Researchers at BSMS in partnership with the Royal Alexandra Children's Hospital are currently exploring the importance of public engagement with research. This work seeks to understand the unique interplay of genetic and environmental factors affecting individual children suffering from allergy, asthma and eczema. Understanding will help tailor management of conditions according to a child's genetic constitution, environment and prescribing alternatives.

Professor Somnath Mukhopadhyay, Chair of Paediatrics at BSMS, says: "Our observations have progressed to randomised controlled trials testing such 'stratified' treatments for children's asthma and allergy care; these have already shown clinical benefit. This has led to NHS and charity support for implementing such novel treatment options at busy children's clinics in Sussex.

"Such research has also made us realise that similar tailored approaches may benefit subgroups of children in whom genetically driven multimorbidity creates major unmet needs that affect diverse conditions which were previously not thought to be related. This may happen, for example, in children with allergies and autism, ADHD and/or anxiety; these children could benefit from tailored treatment approaches that are specific to their needs."

Although such 'personalised' approaches have been advocated by policymakers, particularly since the discovery of the human genome, progress towards implementation in day-to-day care has been slow. There is an important need for exploring the barriers and facilitators for a more 'one size fits one' approach within children's healthcare and embedding change in practice at the coalface.

One project seeking to do just that is the Onesizefits1 project, led by Professor Mukhopadhyay. He says: "We are working closely with the NHS, which is directly funding some of our initiatives, to help embed such tailored approaches within clinical training and practice. Our hope is that Onesizefits1 will help us in our efforts to improve the care of children with eczema, allergies and asthma."

Find out more about Onesizefits1 on Instagram and Twitter/X at **@onesizefits1**.



A CONVERSATION WITH





DR JESSICA ECCLES



What is your role?

I am Clinical Senior Lecturer in the Department of Neuroscience at BSMS, conducting research into brain-body interactions. I am also a practising psychiatrist in the neurodevelopmental service at Sussex Partnership Foundation NHS Trust, where we have just set up the world's first neurodivergent brain body clinic.

What are your particular research interests?

I'm interested in a difference in people's bodies that is manifested in terms of having unusually flexible joints (hypermobility). This relates to a difference in the connective tissue in building blocks in the body and may be associated with a number of strengths and challenges.

So people with hypermobility may be particularly suited to gymnastics or sport, but they are also more likely to experience problems like pain or persistent fatigue. There also seems to be some brain-body interactions in terms of conditions like anxiety and being more likely to be neurodivergent, so being autistic or having ADHD or Tourette's syndrome. Our work involves trying to put all of these pieces together and work out why some people are more likely to experience these conditions with the hope that we can offer personalised interventions to help support people.

We are also looking at the interrelationship between the inflammatory system and the autonomic nervous system (the involuntary nervous system) and why people with this particular body type may be more likely to experience pain and fatigue. It's hoped that by better understanding these biological mechanisms we will be able to target treatments on a personal level.

What got you interested in this area of research?

That's quite a story in itself. When I was a medical student, on my orthopaedics rotation, I was told by an orthopaedic physician that I had sway-back knees. Having my hypermobility pointed out sparked an interest in pain because at medical school I was in a lot of pain and spent some time in a pain rehabilitation programme. I have a hypermobilityrelated condition that led to early arthritis and a hip replacement a couple of years ago.

So I'm in the somewhat unusual position of being a doctor who's also a patient. That can bring real insights to both clinical practice and to research, especially when thinking about conditions like pain, which are often thought of as subjective and difficult to test. Patients experiencing chronic pain often feel dismissed and overlooked, so enhancing our understanding of those types of conditions can make a real difference to how patients feel about themselves.

When I started a career training in academic neuroscience here at BSMS, I met Prof Hugo Critchley who was also interested in hypermobility, and in his previous role at the autonomic unit in London had noticed that people who had an overactive fight or flight nervous system seemed to be more likely to have flexible joints. This inspired us to study brain scans at the Clinical Imaging Sciences Centre, and we found that people who had hypermobile joints had differences in the amygdala, the part of the brain associated with emotion, anxiety and fear processing.

What particular research are you currently working on?

We're currently working on a couple of exciting projects. One is looking into whether there's a relationship between having flexible joints and being more likely to experience long Covid.

Another project, funded by the charity Dysautonomia International, is looking at body-brain interactions in terms of a phenomenon called brain fog. Covid has made people really interested in brain fog, as has increasing awareness of the menopause, ADHD and chronic pain conditions.

We think that for some people, particularly those with a condition called postural tachycardia syndrome, the challenge of going from lying to standing leads to blood pooling in the limbs, and not necessarily perfusing or reaching the brain, which might lead to a brain fog.

So we are doing a novel piece of work where we scan people's brains, measuring perfusion while simulating the stress on the body of what it might be to go from lying to standing, by using a device called a lower body negative pressure chamber. This technique has been done before but this will be the first time in a patient population.

What do you enjoy most about your research?

My work is always different – there is always something new to look into and new connections to be made. But what I really enjoy is the interaction with patients and participants and the fact that together we improve awareness and understanding for people who often feel like they are not adequately understood by the current medical paradigm.

How do you think this research could help in terms of benefit to patients and health care?

I think the real message is that one size does not fit all and not everyone benefits from all of the conventional treatments. So working out who does and who doesn't and why will make things easier and better for doctors and patients alike.

Where would you like to take your research in the future?

We are in the very early stages of this research, and I believe raising awareness will have the greatest impact in terms of patient benefit. Although this difference in body type of people with flexible joints has always been around, it is not well known and not well appreciated. I feel that we have a duty to try to work with stakeholders at a high level to ensure that this is an important part of the medical curriculum and training for allied health professionals, and that policy makers are aware of this condition.

GETTING CREATIVE WITH GENOMIC MEDICINE





Top: Professor Bobbie Farsides Above: Dr Rich Gorman Below: *Helix of Love*



B obbie Farsides, Professor of Clinical and Biomedical Ethics, and Dr Rich Gorman, Research Fellow at BSMS, have been working with patient groups and families affected by rare disease to explore how the hope and promise surrounding new medical technologies are (re)shaping their social worlds and lived experiences. At the heart of the project is a wish to give a voice to those who have put their faith in genomic medicine, be that to secure a diagnosis or treatment or as a contribution to research.

This work is part of the Wellcome Trust-funded EPPiGEN project, which Professor Farsides has been leading with Professor Anneke Lucassen of the University of Oxford for the past five years. The project examines the extent to which healthcare professionals, scientists and patients are ethically prepared to deal with the rapid expansion and mainstreaming of genomic medicine within the NHS.

Prof Farsides and Dr Gorman have been working closely with a group of families for three years, co-producing and then employing arts-based methodologies to capture the day-today reality of living with rare disease. The outputs and data generated will ensure that the current genomic enthusiasm is informed by a meaningful understanding of people's experiences in the medical arena and beyond.

So far participants have engaged with life-writing, stop-motion animation,

poetry, collaging and graphic medicine as creative ways of reflecting on their concerns, the challenges they face and their significant moments and encounters. Parents with busy and demanding lives have valued the opportunity to come together, often virtually, and share their experiences with one another, the research team and then with wider audiences. Work has also been performed, displayed and discussed at stakeholder events across the country, reaching influential audiences and clearly creating a significant impact.

Most recently, Prof Farsides and Dr Gorman have worked with a group of project participants to publish a collection of poetry titled Helix of Love. The collection distils down the complexities of caring for a child with a rare disease, the ordinary joys and challenges of parenting and the extraordinary efforts required to navigate a society that is not best set up to meet the needs of your loved one. Alex Davey, mother and one of the poets who contributed to the collection, said: "I have been both inspired and liberated by this project; finding poetry has given me a whole new way to express myself. I hope through our poems we can show both the clinicians that treat us and other families starting out on similar journeys that we are not medical curiosities or objects of pity, but ordinary people living and loving rich, multi-faceted lives."

Helix of Love can be read online at issuu.com/b-s-m-s/docs/helix_of_love.



Prof Martin Llewelyn discusses the new partnership at the launch event in 2022

Partnership established to develop research collaboration

new partnership to bring together academic and NHS partners throughout Sussex to develop shared research infrastructure, capacity building and collaboration launched in 2022. The Brighton and Sussex Health Research Partnership (HRP) was established by BSMS with the aim of helping each partner organisation to realise their research ambitions.

Prof Martin Llewelyn, Academic Director of the partnership, says: "We believe that by working together in partnership we can establish a unique profile for health and care research in the area. It is always a challenge to think beyond our own deadlines and targets, but together we have the opportunity to develop a shared, unique profile for health and care research in our area. We are perfectly placed to expand and develop research in Brighton and Sussex, and to make a tremendous positive impact on our local population."

The partnership has established

strong links with healthcare partners; three universities and four NHS trusts are now represented at executive and board level – and a public advisory group is being established to advise research and care strategy at every level. Building on NHS guidance for Integrated Care Systems on maximising benefits of research, the executive are working increasingly closely with NHS Sussex to align strategic priorities with the population health needs of Sussex.

The HRP team is reviewing the current research infrastructure across their partners and is keen to ensure they are working closely with the aim of identifying joint opportunities for collaboration. The team is also developing a proposal for a multiprofessional clinical academic training office to support clinical academic training, research support and mentoring opportunities. Find out more and sign up for the HRP newsletter at **bsms.ac.uk/ hrp**, or on Twitter/X @sussex_hrp.

The BSCTU team were awarded full registration

in early 2023



Clinical Trials Unit gains full registration

arlier this year, the Brighton and Sussex Clinical Trials Unit (BSCTU) was awarded full registration with the UK Clinical Research Collaboration (UKCRC), boosting opportunities for research collaboration in the region.

The BSCTU is a specialist unit which works with researchers (within BSMS and beyond) to design, deliver, analyse and publish research studies which will change practice and improve lives. The unit works in partnership with clinicians and academics in primary and secondary care and social care settings looking at a variety of disease areas.

Director of the BSCTU, Wendy Wood, who joined the team in May, is proud of the team's work in reaching this important milestone. "Achieving full registration was a fantastic achievement by the previous Director Nicky Perry and her team, and we hope to build on this by growing the CTU over the next few years," she says. "To achieve this, we need grant funding and are currently working on some interesting new grant applications with researchers from BSMS and further afield."

There are 45 UKCRC registered CTUs around the country with a wide range of size and focus. Some are specialised in particular disease areas or settings (such as cancer, primary care) but others have a more generalised portfolio.

WHAT MAKES POLICY?

Gem Aellah, Research Fellow within the Department of Global Health and Infection at BSMS, reflects on what makes policy in relation to her research as part of the Social Sciences for Severe Stigmatising Skin Conditions Foundation, a collaborative research partnership between the UK, Sudan, Ethiopia, and Rwanda, funded by the National Institute of Health Research. This programme has a vision of using social science in multiple ways to help end neglect of diseases of poverty, such as scabies, mycetoma and podoconiosis.

Below left: An anthropologist at work. ©Johnson Alouch Ondiek, with Gem Aellah, jaorts@yahoo.com (2023)

Below right: Have I dedicated myself and my life to the right thing? ©Johnson Alouch Ondiek, with Gem Aellah, jaorts@yahoo.com (2023)

'Policy' is a huge, slippery, glossy word. One that is hard to actually define, but which is used casually among people who work in global health as if we all know what it means. When people imagine how policy gets made, they tend to think about bureaucracy and bureaucrats - the 'rule of desks', documents and the faceless people who make them. Such faceless thinking likely happens because the concepts of 'policy' and 'policymakers' are too big to think about contextually, so the messy, human side of policymaking gets hidden from the outsider's view. I am an anthropologist studying global health policy-making practices on three neglected diseases of poverty: scabies, podoconisis, and mycetoma in the UK, Ethiopia, Sudan, and Rwanda. Anthropology explores what it means to be human in the fullest sense, incorporating feeling, the power of human connection and individual biographies, alongside analysis of social, economic, and political structures. Therefore, my anthropological study of policy involved in-depth exploration of the personal experiences of some of the supposedly faceless people, as well as bureaucratic processes, involved in what gets glossed as 'global health policy'. I did this mostly by simply talking to people, asking them to tell me their

stories and give their perspectives on how and why things happened over time, as well as by observing and participating in some events considered important for policy making.

In the process, I learnt that rather than policymaking being mainly about faceless people, anonymous documents, rules and endless desks, it is also about very human things such as the rituals of meetings, individual biographies, happenstance, and perhaps most importantly, love, expressed in multiple ways, including empathic connection with others. In the words of one participant: "Love is the most powerful driving force for policy making, for people to take issues to the highest level of policy-making [because] as a human being when you see some of those things first-hand you cannot really tolerate them." Many of my participants described key memories of small moments of intimate human connection with people suffering from eradicable diseases as part of what keeps them working, despite the processes of policychange being slow, laborious, and unsure. According to one participant, a surgeon and now policy-advisor in Ethiopia, such seminal memories, such as the voice of a boy with the beginnings of a progressive stigmatising skin-disease asking whether





he would look like other disfigured patients when he was older "still trickles around my ears" many decades later. Other participants expressed feelings of despair as to whether all their efforts – and funding resources – were really being used to solve the concrete problems of neglected diseases for those at immediate risk.

These emotional aspects of policymaking are rarely openly talked about. Yet my research leads me to think it is vital to do so; to find ways to productively recognise and harness the humanness of things that both feel and can become distant and bureaucratic. Lately, a lot of talk about global health policy practices has focused on the awful side of humanity - annihilation the ways policy practices can add up to the condemnation of whole segments of populations to death or to half-lives, what is called necropolitics. While I also find this characterisation compelling, the danger of a sole focus on narratives of necropolitics is that it can induce nihilism. It becomes too hard to see a way to change whole systems, so we give up.

One question throughout my research has been: when confronted with overwhelming feelings of impossibility of fixing awful problems, how do both individuals and groups find productive ways to keep going, change direction but keep striving to follow a line that may be wobbly, and sometimes double-back, but still moves forward somehow. This, in fact, fits with the broader thinking of philosopher Mbembe, who coined the term necropolitics. In his writing on change, Mbembe argued that change does not move 'in a closed orbit' but rather points in several directions at once, and simultaneously occurs at different speeds, on different time scales. The stories I have collected through my research offer some potential counternarratives to necropolitical policymaking; stories animated by human connections with others and containing small but vital hopes for finding ways to change the world.

Find out more about Global Health research at BSMS online at **bsms.ac.uk/**global-health-and-infection.



Researchers consult with citizens about 'unlocking health data'

In the South East England region of Kent, Surrey and Sussex (KSS), parts of the NHS are being joined together for the first time and are working to use NHS patient data to help understand the health needs of their populations. The NHS is also working closely with the county and city councils, which employ teams working in public health. These teams are using the joined-up NHS patient data to understand which local communities are at risk of poorer health, so they can design strategies to meet communities' needs.

The BSMS researchers saw this as an excellent opportunity to ask citizens of Kent, Surrey and Sussex their views on how they would like these datasets of their health records to be protected, what sort of projects they hoped they would be used for, and how they would like to be involved in ongoing decision-making.

Funded by the National Institute of Health Research, they hosted five discussion groups with 79 KSS citizens to give information on the new health datasets and invite discussion about the issues. KSS citizens supported the use of their anonymised, joined up health data to improve health service efficiency and resource management, to improve out of hospital services, and to make NHS services and information flows more joined up. Citizens were worried about data accuracy, data leaks and security, and commercial uses of data. They suggested that dataset teams should be transparent about uses of data, let the public

know how data analysts would be held accountable if they broke the rules, and wanted to see ongoing, inclusive and valued involvement of the public in decision-making.

Dr Elizabeth Ford, Reader in Health Data Science at BSMS, who led the project, said: "We had a great response from a diverse group of citizens from across KSS and they really engaged with what their health data meant to them, and how valuable it could be to analyse it to improve services for everybody. There was so much enthusiasm from the participants, and they wanted to continue being involved and shaping plans for using data for health and care in KSS."

These findings have fed directly into a new NHS England programme, which is funding a series of regional secure data environments (SDE). Kent and Sussex NHS organisations are working together to hold linked NHS and local authority data securely and make it available for research and development. Dr Ford will be the public engagement lead for this new NHS initiative in Kent and Sussex, and is working with the SDE team to create a comprehensive communication and engagement strategy, so that all citizens of Kent and Sussex feel the SDE is run in a transparent and trustworthy way. The Unlocking Data findings feed directly into this strategy and will guide many of the decisions being made in the SDE.

For more information see the Unlocking Data website at **bsms.ac.uk/unlocking-data**. leading expert at BSMS has contributed to a pioneering initiative to develop software that could help doctors in navigating difficult conversations.

Doctors and medical students will have the opportunity to use a simulation enhanced by AI software which aims to help doctors by improving their ability to identify anger signals, recognise how different responses can diffuse or exacerbate anger, remain calm in hostile situations and move the situation forward with empathy. The technology has been developed by Bodyswaps, a British virtual reality company working in collaboration with the Royal Society of Medicine (RSM).

Professor Dame Lesley Fallowfield, Professor of Psycho Oncology at Sussex Health Outcomes Research & Education in Cancer (SHORE-C) at BSMS, is the chief academic consultant on the project, with years of experience in mastering difficult conversations. She says: "Communicating with patients is a core clinical skill, but it's not something healthcare professionals get much formal training in.

"Anecdotally, we know that healthcare professionals regularly face increased levels of verbal abuse from patients. And medics often say that handling angry patients and relatives is one of their greatest challenges. Learning how to diffuse anger is an important skill, irrespective of the setting."

Doctors and medical students will wear VR headsets to meet virtual patients and family members in a series of scenarios. The software analytics measure the extent to which learners defuse or aggravate the patient or relative's anger through the composition of their speech and non-verbal communication, such as eye contact, pace, volume, intonation and hand gestures. Users are then asked to complete a self-reflection questionnaire to see how much their confidence levels have improved from the training.

Dame Lesley suggested the scenarios used in the project, which includes communicating with an upset husband who believes that there is a lack of urgency from the medical team



Using virtual reality to navigate difficult conversations





about his wife's breast cancer and an unhappy and uncooperative elderly man who has started to develop urinary incontinence. She also co-scripted the module and even recorded her own avatar's voice-over at the University of Brighton's media studio.

Two other members of the SHORE-C team, Dr Valerie Shilling and Rachel Starkings, have recently won scholarships from the RSM and will conduct projects about the 'Navigating Difficult Conversations with Angry Patients' module. A post-Covid-19 pandemic survey of 1,000 GPs showed that almost three-quarters (74%) experienced increased levels of patient abuse compared with before.

The central aims of SHORE-C are to evaluate the health outcomes of patients, especially those treated for cancer. The academic background of SHORE-C members is primarily neuropsychology, experimental, social and health psychology not clinical psychology or psychiatry. Find out more at **shore-c.sussex.ac.uk**.

New scanner aims to 'revolutionise healthcare'

esearchers at the Clinical Imaging Sciences Centre (CISC) have been using a new lightweight magnetic resonance imaging (MRI) scanner since August 2022. The scanner operates at a very low magnetic field of 50 millitesla, a field 60 times lower than that of the 3T MRI scanner currently used at CISC for research. The new scanner is also much lighter than its high-field counterpart, weighing a mere 250Kg compared with the hefty 13 tons of the 3T MRI scanner that arrived at BSMS in 2017.

Professor Itamar Ronen, Academic Director at CISC, says: "Low field MRI has the potential of revolutionising healthcare as it can dramatically increase the accessibility to medical imaging. Furthermore, the scanners are significantly cheaper to purchase and to maintain than MRI scanners at higher fields. Their light weight makes them portable, and the flexible design

Below: The CISC team with the new scanner

of their magnets allows for their easy adaptation to scanning particular patient populations or specific body parts. The low magnetic field also removes many of the restrictions that prevent many patients from being scanned in MRI scanners, such as patients with metallic implants."

It is hoped that low field MRI scanners will provide much needed sustainable solutions for medical imaging in remote areas where the population frequently has no access to medical imaging of any form. Low field MRI scanners could also become part of the GP diagnostic and followup toolkit, allowing them to monitor disease progression and response to treatment, for example in tumours, stroke and multiple sclerosis.

CISC is one of the very first imaging centres in the UK to purchase a low field MRI scanner, with the intention of making low field MRI a central element in its methodological research and development agenda. Research will focus on improving image quality with advanced image analysis and acquisition methods, as well as on developing protocols for providing reliable diagnostic data on patient populations.

The new scanner provides CISC with a unique opportunity to collaborate with researchers across BSMS and its two partner universities on cutting-edge projects related to image analysis, electrical engineering, system design and a variety of clinical applications. CISC will actively seek links with other medical centres in the UK and abroad, including with hospitals in countries that can benefit from low field MRI through collaboration with the Global Health and Infection department at BSMS.

CISC celebrated its 15th anniversary with an open day in December 2022 at the Medical School Teaching Building. Around 90 delegates attended the day from partner universities, the medical school, the NHS and the industrial sector. Find out more about CISC at **bsms.ac.uk/cisc**.



