

Pulse

Spring 2016

The Brighton and Sussex Medical School magazine

World first!

Living with dementia

Project improves students' understanding

In this issue

- Computers can tell if you're bored
- Why we suffer from performance anxiety
- Better communication key to effective healthcare



from the Dean,
Professor Malcolm Reed

Having just returned to work following my first significant interaction as a patient with the NHS for almost 30 years, I can vouch for the high standard of care and treatment provided for patients and the life-changing impact of treatments such as the one I have undergone (total knee replacement). This is set against the current turmoil over the Junior Doctors' contract and the threat of ongoing problems relating to contractual arrangements for consultants and allied health professional staff in the NHS.

These are naturally a cause of concern for both students and staff at BSMS, and as yet, resolution of this dispute seems as far away as ever. Despite these problems and the undoubted financial and other challenges faced by our major NHS partners, BSMS continues to perform strongly, with numerous examples of high-quality teaching and research success.

Maintaining this high performance requires constant effort and attention and I am grateful to all colleagues for their engagement over the past nine months, as we have reviewed the School structure. As a result, we have created three new and two refreshed departments, with an enhanced focus on research and teaching activity.

I hope that all these adjustments will be made by the new academic year so that colleagues at BSMS can get on with what they do best – teaching, researching and treating patients.

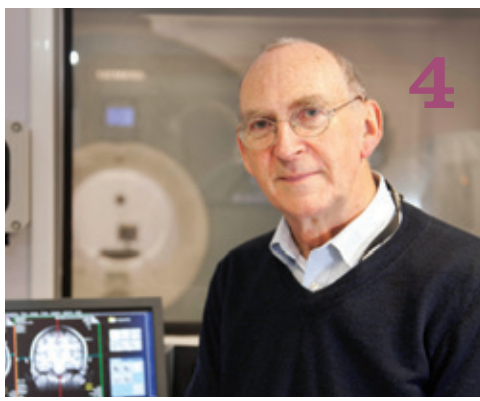
At the Medical School we are involved in an exciting new project to help our students gain a better understanding of living with dementia. Time for

Dementia (page 12) involves Year 2 and 3 students making regular visits to a family affected by the condition, where they are able to learn about its impact on both the patient and their loved ones, and see how it progresses over time. We believe that such projects should ultimately lead to better treatment and care for people living with dementia.

We are also launching an exciting new network to improve care for motor neurone disease later this year (page 4). Professor of Neurology Nigel Leigh is leading on the new network, which will provide a multidisciplinary approach to care for patients, and pave the way for further research into treatments for this disease.

Finally, I would like to congratulate Professor Dame Lesley Fallowfield, who last month was awarded a DBE for her work in psychosocial oncology. Dame Lesley's work at Sussex Health Outcomes Research and Education in Cancer (SHORE-C) has helped transform the way we care for people with cancer. Her team has patient quality of life at the forefront of their research, helping ensure that people can not only live longer with cancer, but can live happier, healthier lives (page 8).

Best wishes,



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Cover: Time for Dementia students Shali Arunan and Emily Lake (see page 12)

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'One-stop shop' for MND

Twenty-one years after revolutionising patient care at the UK's first Motor Neurone Disease (MND) Care Centre, BSMS Professor of Neurology Nigel Leigh is developing a new network to enhance patient care and research in the Sussex region.

Joined-up care

The Sussex MND Care and Research Network will be launched at BSMS later this year, providing a multidisciplinary approach to care for patients.

"Up until the 1980s, care for patients with incurable progressive neurological conditions around the world largely consisted of health professionals working as individuals rather than in teams," says Professor Leigh.

As Chair of Neurology at King's College Hospital in London, he established a research clinic and worked with the Motor Neurone Disease Association to develop the first UK 'one-stop shop' for MND care. The MND Care Centre brought together a team of experts in neurology, speech and language therapy, occupational therapy, nutrition, physiotherapy and palliative care to provide integrated care for people with MND.

"Prior to this, palliative care was the last step in care, but this has changed. Starting with our collaboration with St Christopher's Hospice in London, palliative care is now seen as an integral component of care throughout the course of MND," Professor Leigh says.

Over the past 20 years, a further 18 MND Association centres and networks have been established throughout England, Wales, and Northern Ireland – making the Sussex network the 20th.

Stakeholders in the new network include patient representatives, local MND Association branches, hospital and community health professionals, palliative care and hospice teams, and researchers. "Patients' feedback shows that their greatest need is for someone

to coordinate their care, and to have their needs met as and when necessary. While there are many excellent local MND services in Sussex, there are also some areas in which the provision of care is less well integrated. The network aims to improve that and to ensure equitable and accessible services are available across the region," says Professor Leigh.

With a primary focus on care, the network will also provide the infrastructure for more ambitious clinical research activities in areas such as epidemiology, genetics and biomarkers.

Living with MND

For Andy Spriggs (page 6), 67, integrated care has made life with MND a little more straightforward. "I have a specialist MND nurse who I see once a month, and she puts me in touch with the right professionals when necessary," he says.

A regular runner, Andy was diagnosed four years ago, after noticing his leg movements had changed and he was tripping over frequently. "It was really difficult hearing the diagnosis, even though it was what I'd been expecting, having read about MND," he says.

Andy also has regular visits from a MND Association visitor, who provides support and advice, and he visits St Catherine's Day Hospice once a fortnight. He sees a neurologist every six months. "I'm very fortunate to have good professional care around me. My condition is progressing relatively slowly but if I needed urgent care, I know the right help would be put in place."



Research



Andy Spriggs and nephew
Chris Spriggs run the marathon
to raise awareness of MND

No treatment has been effective for Andy so far, and he believes there must be a greater focus on drug research and development. “We need to find a treatment that significantly slows the progress of MND and, hopefully, eventually a cure,” he says.

Trialling new treatment

Work is underway in Brighton to recruit patients for clinical trials that aim to find new treatments for MND. The most ambitious trial, ‘MIROCALS’ (Modifying the Immune Response and Outcome in Amyotrophic Lateral Sclerosis), will test a molecule that occurs naturally in our bodies and helps to regulate our immune system.

Currently, a low dose of the molecule, interleukin-2 (IL-2), is being developed for the treatment of conditions affecting the immune system, including diabetes, arthritis, liver disease, and the complications of treating leukaemia and other cancers with stem cells. While IL-2 has been used for many years at a high dose to treat cancer, it is much safer – but still effective – when used at low doses in these immune disorders, as it can damp down harmful immune responses.

“We hope to achieve a breakthrough in the treatment of MND by significantly slowing the progress of the disease through a low dose of IL-2,” says Professor Leigh, co-lead and chief investigator, who is working closely with the study coordinator, Dr Gilbert Bensimon, from University Hospital, Nîmes, France.

To date, only one drug – riluzole, licensed in 1996 – has been shown to slow the advance of MND. However, its impact on the quality of life of people with the illness is marginal. Many other drugs have been tested but have failed.

MIROCALS involves a collaboration among world-leading European research groups in biomarker development, immunology, genetics and gene expression. “This powerful alliance will allow us to research a number of factors that may affect MND. Taken together, these analyses should allow us to ‘individualise’ responses to treatment that may be revealed during the study,” says Professor Leigh.

Researchers plan to recruit the first patients into the trial by September 2016, and to complete the study in 2019. Five UK centres and five French centres aim to recruit a total of 216 people with MND.

MIROCALS is funded by an award of €5.98 million by the European Commission Directorate-General for Research and Innovation, under the EU Horizon 2020 Scheme, with additional funding from the Programme Hospitalier pour Recherche Clinique (PHRC) in France.

Researchers at BSMS are also collaborating with colleagues around the UK on a project using magnetic resonance brain scanning to learn more about nerve cell damage in MND, along with a study to identify molecular biomarkers of MND in blood and spinal fluid samples.

“We have built a well-funded research programme spanning laboratory and clinical research, but never losing touch with the core mission of improving life for people affected by MND through better treatments and more compassionate care,” says Professor Leigh. “In all this, our partnership with people affected by MND and with the MND Association is vitally important.”



Computers can tell if you're bored

Technology could lead to reactive on-line learning programmes and 'empathetic' robots.

Computers are able to read a person's body language to tell whether they are bored or interested in what they see on the screen, according to a new study led by body language expert Dr Harry Witchel, Discipline Leader in Physiology at BSMS.

The research shows that by measuring a person's movements as they use a computer, it is possible to judge their level of interest by monitoring whether they display the tiny "non-instrumental" movements that people usually constantly exhibit. If someone is absorbed in what they are watching or doing – what Dr Witchel calls 'rapt engagement' – there is a decrease in these involuntary movements.

"Our study showed that when someone is really highly engaged in what they're doing, they suppress these tiny involuntary movements. It's the same as when a small child, who is normally constantly on the go, stares gaping at cartoons on the television without moving a muscle," says Dr Witchel.

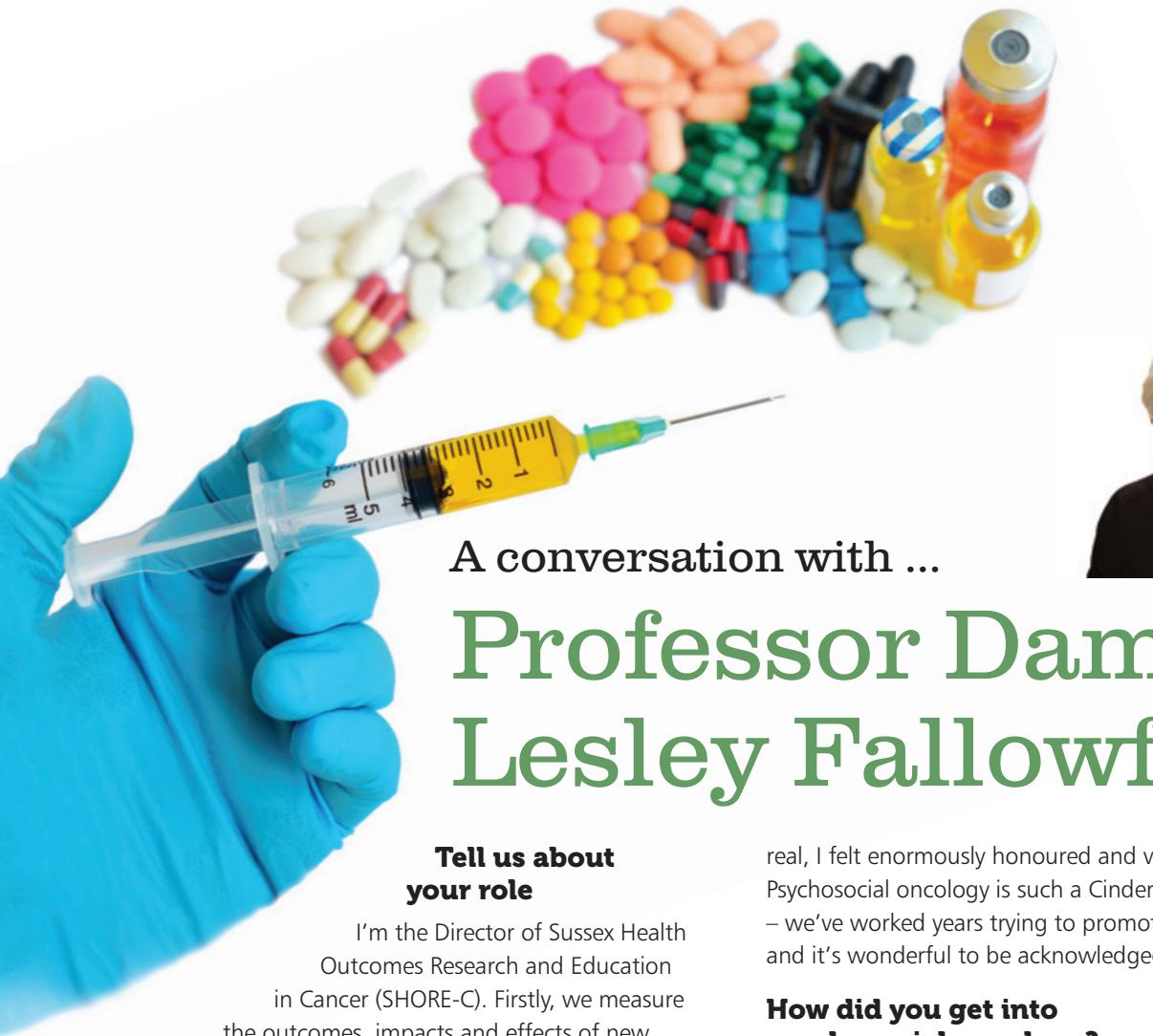
The discovery could have a significant impact on the development of artificial intelligence. Future applications could include the creation of online tutoring programmes that adapt to a person's level of interest, in order to re-engage them if they are showing signs of boredom. For experience designers such as movie directors or game makers, the technology could

provide complementary moment-by-moment reading of whether the events on the screen are interesting. While viewers can be asked subjectively what they liked or disliked, nonverbal technology would be able to detect emotions or mental states that people either forget or prefer not to mention.

"Being able to 'read' a person's interest in a computer programme could bring real benefits to future digital learning, making it a much more two-way process. Further ahead it could help us create more empathetic companion robots, which may sound very 'sci fi' but are becoming a realistic possibility within our lifetimes," Dr Witchel adds.

In the study, 27 participants faced a range of three-minute stimuli on a computer, from fascinating games to tedious readings from EU banking regulation, while using a handheld trackball to minimise instrumental movements, such as moving the mouse. Their movements were quantified over the three minutes using video motion tracking. In two comparable reading tasks, the more engaging reading resulted in a significant reduction (42%) of non-instrumental movement.

The study was published in open access journal *Frontiers in Psychology*.



A conversation with ...

Professor Dame Lesley Fallowfield

Tell us about your role

I'm the Director of Sussex Health Outcomes Research and Education in Cancer (SHORE-C). Firstly, we measure the outcomes, impacts and effects of new treatments on patients with cancer. We look at the psychosocial aspects, how the diagnosis and treatments affect patients' quality of life. We also work on ameliorative interventions – to help patients cope with the worst side effects of such treatments.

Another key part of our work involves improving information and communication about cancer. So we run treatment communication skills courses for healthcare professionals and create DVDs for patients considering taking part in clinical trials.

Congratulations on your recent damehood. How did you feel when you found out you were to receive the honour?

Initially, when I opened the envelope I actually thought it was a joke – I have some wicked friends who enjoy sophisticated pranks. But when I recognised it was for

real, I felt enormously honoured and very surprised. Psychosocial oncology is such a Cinderella topic – we've worked years trying to promote this field and it's wonderful to be acknowledged in this way.

How did you get into psychosocial oncology?

I had been researching the visual disturbances caused by various neurological disorders such as MS, when my close friend Liz Stapleton was diagnosed with leukaemia. In time she lost the fight, and died after suffering side effects from a bone marrow transplant. She made me promise that I would work in cancer and I did exactly that, completely changing research careers.

Why do you think psychosocial oncology is an important field?

Psychosocial oncology is absolutely pivotal now. The world of cancer has been transformed in the last few years, with treatments improving dramatically. Drug approval can be granted on the basis of fairly small improvements to patient survival. This raises important questions as to whether for patients the side effects of treatment are worth what are often modest extensions in survival.

Many people are now living a lot longer with cancer – in fact some cancers are now classed as chronic diseases. But we have to ensure the quality of that extra life, and put interventions in place that we know help people to maximise that survival time.

What are you working on at the moment?

We're looking into how patients with advanced cancer cope with the drugs, which frequently have side effects such as overwhelming fatigue, nausea and chronic diarrhoea. These can really limit the opportunities to enjoy that extra time the drugs may (or may not) buy you. Advances that might excite a clinical scientist may be of little value to a patient experiencing such side effects. So we examine how worthwhile treatments are from a patient's point of view – the value that patients place on the drugs compared with the side effects experienced. Collecting these patient-reported outcomes also helps us to test interventions aimed at helping patients.

In one particular study, for example, we are looking at a class of drugs known as tyrosine kinase inhibitors, which produce terrible diarrhoea in many patients. This means people can be reluctant to leave the house, and standard drugs like loperamide just don't work. So we're now trialling the use of an injection to help the diarrhoea – and measuring the impact this has on patients' quality of life.

How do the different aspects of your work all tie together?

What we do is very interrelated. For example, we might work on a qualitative study interviewing patients or give patients quality-of-life questionnaires in a clinical trial comparing two treatments. Then we might use the results to develop ways to minimise the worst side effects, be that through the use of other drugs or psychosocial support services.

These results could also feed into communication skills training. It's important that healthcare professionals can offer a balanced view to patients when they are making decisions about treatment options. This isn't always easy. But it's vital that patients are able to work out what the best choices are for them as individuals.

Are there any developments as a result of your work you're particularly proud of?

We have done a lot of work developing methods to measure symptoms and side effects from the patient point of view – known as patient-reported outcomes (PROs). This has involved producing valid and reliable patient questionnaires or interview schedules.

At last it's been recognised that these measures have to be incorporated into any evaluation of how effective a treatment is. We've had a considerable role in developing psychometric tests to use in major international clinical trials of new treatments.

Our evidence-based communications skills training for healthcare professionals is also being rolled out on a global scale. It's encouraging to know that our work is reaching so far and helping to improve life for people with cancer around the world.

What further developments would you like to see in cancer care in the future?

We'd like to see every cancer centre providing upfront, proper supportive care alongside treatment. Ensuring that people aren't fatigued, depressed or feeling sick shouldn't be a luxurious add-on – it should be part of good cancer care.



Professor Dame Lesley Fallowfield
at Buckingham Palace

Why we crack under pressure

As many of us know only too well from personal experience, the anxiety of being watched can have a disastrous effect on how we perform.

Neuroscientists at BSMS and the University of Sussex's Sackler Centre have identified the brain network system that causes us to slip up when experiencing performance anxiety.

Dr Michiko Yoshie and her colleagues Prof Hugo Critchley, Dr Neil Harrison and Dr Yoko Nagai were able to pinpoint the area of the brain responsible for performance mishaps during an experiment using functional magnetic resonance neuroimaging (fMRI).

Participants' brain activity was monitored while carrying out a task that required them to exert a precise amount of force when gripping an object. They reported that they felt more anxious when they believed they were being observed, and gripped the object harder without realising it.

Scan results showed that an area of the brain that helps control sensorimotor functions, the inferior parietal cortex, became deactivated when people felt they were being observed.

It is thought this part of the brain works together with another part, the posterior superior temporal sulcus, to form the action-observation network (AON). The AON is involved in "mentalisation" processes by which we infer

what another person is thinking, based on their facial expressions and direction of gaze.

Dr Yoshie says: "We realised that AON might also be related to performance anxiety because when being scrutinised, we tend to care about how the audience is feeling about us and our performance."

For those with extreme performance anxiety, she said there has been a substantial advancement in brain stimulation techniques and types of neurofeedback training, which can help people to learn how to control their own brain activity.

She adds: "It's important to believe that the audience is supporting you. To strengthen such belief, you should perform in front of your supporters. For example, before an actual public performance, a musician could perform in front of family and friends and receive a lot of applause. This would help you to induce a desirable activation pattern in your brain and boost self-confidence."

The study is published in *Scientific Reports*.



Breath of fresh air

Researchers are to conduct the first real-life study to see whether children and young people respond better to a personalised approach to asthma treatment than to the standard treatments.

Studies show 100,000 young people are routinely prescribed an asthma controller medication called salmeterol, which appears to offer little benefit to some patients.

Researchers at BSMS and colleagues at the Universities of Dundee, Aberdeen and Queen Mary University of London are starting trials on children and young adults aged 12-18 with asthma who are not responding well to the standard treatment.

“Our research has previously found that around 15% of children and young adults have a particular gene variation that is linked to poor asthma control with this treatment,” says Professor Somnath Mukhopadhyay, Chair of Paediatrics at BSMS. “So we are investigating whether young people’s genetic make-up should be taken into account when deciding whether to give them the routinely used salmeterol, or an alternative medication called montelukast.

“Not receiving effective treatment for asthma results in more school absences and more emergency visits to the GP or hospitals. Long term, this poor asthma control could have an impact on their education and future job prospects,” he adds.

The Personalised Medicine for Asthma Control (PACT) study, funded by the children’s charity Action Medical Research, will involve 240 young people recruited from general practices and hospitals.

Participants will be asked to provide a saliva sample in order to find out their genetic status. Half of them will then be prescribed an asthma add-on controller medication according to their gene test results, and



the others will be given standard treatment without knowledge of their gene test, as is currently the case.

They will then report from home online about their quality of life at three, six, nine and 12-months after commencing the study. This new method of collecting research data will avoid the need for hospital visits, save costs and show whether the personalised approach improves life quality. All participants will be given the results of their gene test and a summary of the study results.

Healthcare professionals and young people aged 12-18 years with asthma and their parents can find out how to get involved at pactstudy.org.uk or call the Tayside Clinical Trials Unit on 01382 383932.

Living with dementia

Students at BSMS are getting to grips with the reality of life with dementia, in an ambitious new project to improve their understanding of the condition.

Time for Dementia is the first of its kind on such a scale, and involves all second and third year medical students as a core component of their course, along with nursing and paramedic students at the University of Surrey – a total of 800 students – and more than 200 local families affected by dementia.

Over a two-year period, pairs of students visit a person with dementia and their carer three times a year, getting to know them and seeing how the progression of the disease affects them and their family. They might spend the time doing life history work with the families, or an activity the patient enjoys.

A growing problem

Dementia is a growing problem globally. There are over 850,000 sufferers in the UK and 44 million world-wide, posing a major challenge for treatment and care. Within the UK, Kent, Surrey and Sussex has the greatest number of older people of any UK region and numbers are set to grow. It's anticipated that by 2030 the number of people aged 65-84 will increase by 33% and those aged 85+ will double. As a result, the numbers with dementia are forecast to grow exponentially, meaning that doctors of the future will need to be better skilled to meet this need.

For third year-students Emily Lake and Shali Arunan, spending time with former community health manager Chris Goodenough and her carer, husband Bryan, has been an eye-opener.

"Before I visited the family, although I had an understanding of the scientific aspect of dementia, I really didn't have an awareness of the social side of the illness – how it affects the family, carers and individual themselves," says Emily.

"By visiting over a two year-period we've been able to get to know the family, and see how the condition has progressed over time."



Shali Arunan
and Emily Lake

Shali adds: "In the past year, we have seen how Mrs Goodenough's dementia has progressed, from short-term memory loss to finding it hard to express herself and jumbling up words. At first she found it hard to go from being a nurse who took care of everyone to being the one having to be taken care of. However, over time she has told us that she has come to terms with her diagnosis."

Chris was diagnosed with Alzheimer's in 2012. "The hardest thing for me has been seeing the change of character in her," says husband, former food technologist Bryan. "To see Chris go from being a confident and outgoing woman to finding it hard to make a simple decision – that's been quite difficult. Alzheimer's affects your entire life – everything you think about doing and planning needs to be adjusted. But we cope."



Bryan says the couple have enjoyed the students' visits. "We both look forward to Emily and Shali visiting – they are delightful young ladies – and we always have an interesting time on their visits.

"It's only six hours a year, which is nothing in terms of giving up our time, but if it contributes to the future knowledge of dementia by doctors, then it's worth doing. I'd encourage anyone in our position to join the initiative."

Project lead and Director of the Centre for Dementia Studies, Professor Sube Banerjee believes the project will help address a national problem with dementia education and the need to upskill the healthcare workforce for an ageing population. "This is the most ambitious programme of its type anywhere in the world, and we envisage that it will change the way in which healthcare students of the future learn about dementia," he says.

"As a medical student you will often see patients only in crisis, and on a short-term basis. Time for Dementia provides a unique opportunity for students to build a relationship with families affected by dementia over a longer term, providing a more in-depth and richer view of what it's like to live with a long-term condition."

Together with the University of Surrey, BSMS is working in partnership with the Alzheimer's Society and Sussex Partnership and Surrey & Borders NHS Trusts to deliver the project, which is funded by Health Education Kent, Surrey and Sussex (HEKSS).

Improving understanding

The benefits to students and families are being comprehensively evaluated. Medical students' learning will be compared with that of peers at the University of East Anglia, who are not participating in the programme. Feedback so far is highly positive, describing enjoyment of the student visits and new insights from the sharing experience.

"The project has definitely increased my confidence in talking to dementia patients and their carers," says Shali. "I have the utmost respect for families affected by dementia and now realise how significantly the condition affects all aspects of their lives."

Emily adds: "It allows you to see another side of dementia that's difficult to learn in lectures – and you are applying what you learn in class to a real-life case. This will definitely help me as a doctor to better understand what these patients are going through."

Chris and Bryan
Goodenough





Better communication key to effective healthcare

Taking steps to ensure doctors are communicating effectively can help save lives, explains **Dr Rob Galloway**.

When I first became a consultant, I asked a member of my team to cross match four units of blood for a complex patient I had just seen. But 40 minutes later there was no blood transfusion ready.

After I called out to ask why there was no blood, my F2 turned to me, rather embarrassed, and said that she had told me 20 minutes ago, that the lab had called and said the blood sample had been mislabelled.

But I had not heard. I had been concentrating on supervising the chest drains that my registrar was

putting in. And because I had not heard, my patient had not had the blood transfusion she needed. She had suffered, not because of a lack of knowledge or a lack of dedication, but because of human factors.

The traditional view would be that as a consultant I should have concentrated harder and the delay in blood was my fault. I would have felt bad, tried to concentrate more in the future and invariably the problem would have been repeated very soon.

So what could have stopped this error from happening? To stop it we would have needed my F2 to say: "Team leader are you ready to receive information?"

But that doesn't happen. The honest reason why that doesn't happen is that we worry that we would sound silly. We need to get over this 'silly factor' and communicate effectively with our colleagues, if we want to prevent errors. We need to embrace human factors; even if we are worried we may sound a bit stupid.

But that was not all that was needed to ensure that I had registered the information and acted upon it. People talk about learning from the airline industry but there are many other industries to learn from. Never has my local Chinese take-away got my order wrong – because they repeat back my order. But in medicine we are not used to that process, even though it prevents errors. Again, because it just feels odd. If we can communicate like this for sweet and sour pork (Hong Kong style), we should do so for our patients.

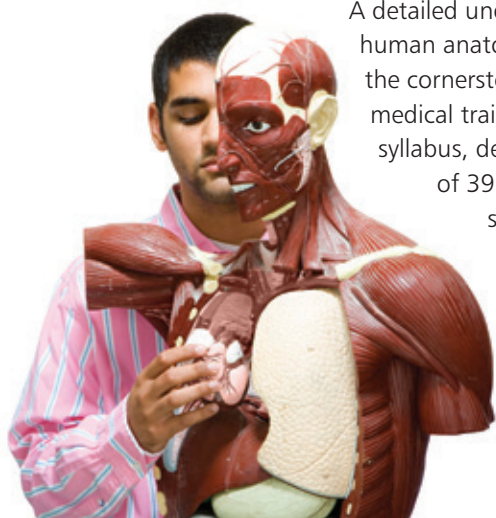
An understanding of how professionals work together and communicate will allow us to prevent errors with simple techniques, leading to better patient care.

Many of us have worked for a number of years on improving human factors for all staff from healthcare assistants to hospital directors. At BSMS we have increased teaching about human factors throughout the curriculum. Our Year 5 safety conference and preparation for practice module were both highlighted in a recent General Medical Council report on teaching safer care at medical school.

Dr Galloway is an A&E Consultant at Brighton and Sussex University Hospitals NHS Trust and Year 5 BSMS Subdean. He runs regular one-day free courses on human factors for health trainers and staff with Health Education Kent, Surrey and Sussex. For further information please contact timothy.chatten@bsuh.nhs.uk.

New anatomy syllabus launched

A new syllabus for teaching anatomy in medical schools has been launched by the Anatomical Society and published in the *Journal of Anatomy*.



A detailed understanding of human anatomy remains the cornerstone of modern medical training. The new syllabus, devised by a panel of 39 practising doctors, surgeons and anatomists, details specific anatomical knowledge that doctors require in order to safely practise medicine.

The project was led by Dr Claire Smith from BSMS with colleagues from Hull York Medical School and Newcastle University.

"The new syllabus reflects the anatomy knowledge that is needed by doctors for practice today and into the future," says Dr Smith, Chair of the Education Committee of the Anatomical Society. "The revised core syllabus of 156 learning outcomes is applicable to all medical training programmes, providing a checklist that will help universities ensure that the medical students they train will be up to the standards demanded by their clinical colleagues."

Professor Tom Gillingwater, Editor-in-Chief at the *Journal of Anatomy* adds: "The modern world of medicine brings many new challenges for doctors in training. This syllabus will set an important new benchmark for anatomy teaching taking place in medical schools, ensuring that the doctors of tomorrow are fully equipped to deliver the best possible patient care."

Screening for ovarian cancer may save lives

New results from the world's largest ovarian cancer screening trial suggest that screening based on an annual blood test may help reduce the number of women dying from the disease by around 20%.

Sussex Health Outcomes, Research and Education in Cancer (SHORE-C) at BSMS has managed the psycho-social part of the study over the past 14 years, which involved 185,693 women.

The early results of the study suggested that approximately 15 ovarian cancer deaths could be prevented for every 10,000 women who attend a screening programme that involves annual blood tests for between seven to 11 years.

"The study has shown that early detection of ovarian cancer through screening can make a significant reduction in the number of women

dying from the disease," says Professor Dame Lesley Fallowfield, Director of SHORE-C and Principal Investigator for the psycho-social component.

"Essentially before launching any population screening of 'well' women it is vital to ensure that the harms of such screening do not outweigh the benefits, which is what our research at SHORE-C focused on. For example, does the screening procedure pick up too many 'false alarms' which might result in women having unnecessary biopsies and worry leading to them losing faith with the process and stop attending for screening? But results showed that there are definitely advantages to screening for ovarian cancer."

The UK Collaborative Trial of Ovarian Cancer Screening (UKCTOCS) is an international ovarian cancer screening trial, led by UCL and funded by the Medical Research Council, Cancer Research UK, Department of Health and The Eve Appeal. The study was published in *The Lancet*.



Choosing the best future doctors

Local healthcare professionals, educators and patients joined BSMS in November 2015 for a workshop to explore the kinds of doctors people want and how the Medical School could best select candidates who have these qualities.

Professor Tony Weetman, Chair of the Medical Schools Council Selecting

for Excellence Executive Group, set the scene for the day by discussing the challenges that medical schools face in recruiting the most suitable students and ensuring that students come from the full breadth of society.

Participants identified the top values they would seek in a doctor as being knowledgeable, honest about

diagnosis and prognosis, willing to learn from others and caring. They then focused on how medical schools could ensure that they select the students who show such values.

"It's shocking that 80% of medical applicants in the UK come from only 20% of colleges," says Darren Beaney, Head of Admissions, Recruitment and Widening Participation at BSMS.

"These statistics show that there are clearly many potentially excellent medical students who are just not getting a look in. Our BrightMed programme is helping to address this imbalance, by helping children who may not have thought a career in medicine is possible to develop the skills to apply for medical school. Following on from the workshop, we are now reviewing our selection process to ensure we select the very best future doctors from all backgrounds."



Online health information varies between languages according to 'newsworthiness'

A new study shows that health information provided to the public on the internet varies greatly between languages and is strongly influenced by its 'newsworthiness'.

Chair in Experimental Medicine at BSMS, Professor Pietro Ghezzi and Ali Maki studied health information available on the internet on influenza (flu), in both English and Italian. Results showed significant variation between the two languages in terms of the information provided, and a dependency on news stories that had previously appeared in the media in English and Italian.

During the flu season, vaccination and hygiene (such as hand washing) are the two key preventative measures for which there is scientific evidence of efficacy. Whether the public adopts these measures is strongly influenced by the information they can find on the web and in the news.

By analysing 400 websites returned by a Google search for influenza prevention and vaccination in English, the study found that websites from government agencies, mostly promoting evidence-based approaches, were well represented. In contrast, commercial websites, more

likely to promote non-evidence-based measures such as foods, vitamins and various supplements, were ranked low by Google and never appeared in the top 10 hits. Only a few anti-vaccine websites were found and these were also ranked low by Google. However, when performing the same study in Italian, commercial websites, non-evidence-based measures and anti-vaccine websites ranked higher and were present in the first 10 hits.

A significant proportion (up to 40%) of the websites in both languages were from newspapers or magazines. Analysis of the news websites found that this news focused on two particular "stories" that had featured in the English and Italian press.

In English, stories focused on the low efficacy of last year's vaccine. In Italian, they were about a health scare, in which some deaths were attributed to two batches of the vaccine. In both cases, the negative "bad news" element appears to have made the stories more prominent in the results. This is true even when that news is later refuted: the Italian



health authorities have since ruled out any association between the vaccine and the deaths, but the original news pages still rank highly in the search results.

Professor Ghezzi says: "This study shows that the quality of information provided to the public through health-related web searches varies significantly between languages. It also highlights 'newsworthiness' as an important aspect of health information results that could potentially impact on the success of the vaccination campaigns."

The study is published in *Frontiers in Immunology* available as Open Access <http://bit.ly/1NsjiVo>

New physician associate course

BSMS will launch a Postgraduate Clinical Diploma in Physician Associate Studies in September. The course will provide students with the knowledge, and professional and clinical skills required to work as a physician associate (PA).

Trained in the medical model, PAs are healthcare professionals who work under the supervision of doctors and surgeons. Their role includes tasks such as obtaining medical histories, carrying out healthcare examinations and advising patients on preventative healthcare measures.

"Our PA students will complete clinical rotations in various specialties ensuring that, once graduated, they are fully

prepared to support the NHS and its doctors with the diagnosis and management of patients," says Course Leader, Dr Wesley Scott-Smith.

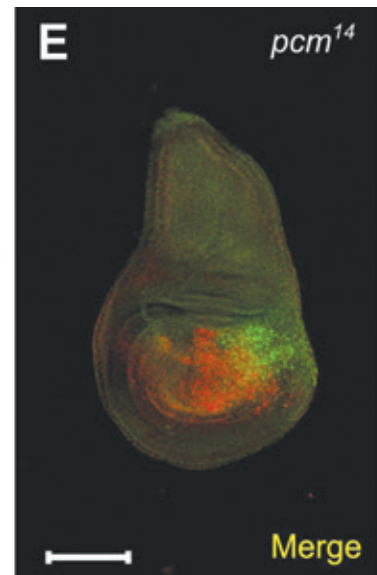
Rachel Forbes-Pyman works as a physician associate at East Surrey Hospital. "Studying to be a PA was the best decision I ever made," she says. "It taught me new skills and knowledge that transformed me from a science graduate into a competent healthcare professional. I've been working as a PA for the last four years and I love that I am able to provide continuity of care for my patients."

Find out more at bsms.ac.uk/physician-associate-studies

Research news

- Dr Sarah Newbury and PhD students Ben Towler, Amy Pashler and Sophie Robinson have had a paper on the Pacman enzyme published in the journal *Nucleic Acids Research*. Ben was also awarded 1st prize for his poster at the RNA-UK meeting.
- The University of Sussex Research Development Fund (RDF) has awarded Dr Val Jenkins £18,838 for a scoping exercise on self hypnosis during chemotherapy for breast cancer. The RDF also awarded Professor Gordon Ferns £9,935 to develop a novel platform for local, targeted treatment of cardiovascular disease.
- Arthritis Research UK has awarded Professor Hugo Critchley's team £250,000 to study the mechanisms of pain and fatigue in fibromyalgia.
- Professor Chakravarthi Rajkumar has been elected as an Executive Committee Member of the hypertension organisation Artery.

A tissue from
a pacman
mutant larva



School and student news

- Fifth-year students Luna Dahal and Irene Francis co-authored articles on ankle fractures and blunt chest trauma, respectively, in the *British Journal of Hospital Medicine*.
- Year 5 students Alex Ridgway and Alex Kalic presented on performance-enhancing drugs among medical students and alcohol-related hospital admissions, respectively, at the European Public Health Conference in Milan.
- Year 3 student Sara Abou Sherif's article on intra-abdominal fibromatosis was published in the *International Journal of Surgical Pathology*.
- Fourth years Katie Whan and Victoria Cathie presented their pilot study into teaching compassion in healthcare at the Asia Pacific Medical Education Conference in Singapore.
- Fifth year Rebecca Gardiner's essay on resilience won first place in a competition run by the College of Medicine.
- Students Jack Maclean (hockey), Mark Oakey (sailing), Rupert Phillips (rugby) and Anastasia Riordan-Eva (ultimate frisbee) were recognised for their sporting success with awards from the Universities of Brighton and Sussex.
- BSMS conferences included the second annual Medical Education Conference 'Innovating Clinical Practice' in December and the UK's first conference on the role of pharmacists in humanitarian responses in March. Experts from WHO and DfID presented, along with pharmacists working in crisis situations in countries including Sierra Leone, Pakistan and Haiti.
- Heene Road Surgery, Worthing has built an extension to house a new consulting room, as part of a collaboration with BSMS. A number of students visit the surgery on GP placement.

Funded places available on simulation courses



Health Education Kent, Surrey and Sussex (HEKSS) is funding 20 places for trainers in simulation wanting to complete the postgraduate simulation-based modules at BSMS, along with 50 places on one-day simulation workshops.

For further information visit the Sussex Simulation Hub (<http://blogs.brighton.ac.uk/simulationhub/courses-in-simulation/>), or contact Programme Administrator Andy Collins at a.collins@bsms.ac.uk

Events explore identity and mortality

Ethics in Performance events at BSMS have continued to ask the bigger questions, tackling issues such as loss and identity, and what objects we might choose to take with us when we die.

October saw a screening of poet Leah Thorn's film 'Watch', exploring the centrality of memory to Jewish identity and capturing the impact dementia had on her and her father's relationship. Leah collaborated with filmmaker Ewan Golder to produce the film, using old family videos, poetry and photography to study the themes of loss, vulnerability, survival and memorialisation.

After the screening, Leah discussed the creative exploration

of identity and the use of art as activism with cartoonist and writer Martin Shovel. "The pairing of Martin with Leah, both of whom experienced a post-war Jewish upbringing, made for a fascinating sense of connection," says Professor of Clinical and Biomedical Ethics Bobbie Farsides, who leads Ethics in Performance at BSMS.

In February, BSMS was transformed for a night into the Museum of Friendship, Remembrance and Loss, as poet Clare Best and her friend, filmmaker Tim Andrews presented their project choosing, sharing and documenting the 21 items they would like to 'take with them' into the afterlife.



After viewing the array of objects displayed in the foyer, visitors heard Clare and

Tim speak about their three-year project and why they chose their particular objects, which ranged from a Noddy doll to a Beatles album, a favourite poem and a pebble found on the beach.

"Both Clare and Tim have faced serious and life-changing health issues over recent years and embarking on this project led each of them to confront their own sense of mortality," says Professor Farsides. "But equally it provided the basis for a growing friendship upon which they both reflected. It was a joy to share this fascinating and personal experience with them."

Events

May

Let's Talk About Death – Brighton Festival

It's official – the UK is the best place in the world to die. What does this mean? It seems death is still a taboo subject we would rather skirt around than discuss candidly.

Covering many aspects of death and dying, including living when you're dying, how to plan a good death and how to plan for one of life's few certainties, this engaging debate features a diverse panel including: Tim Crouch, director of *The Complete Deaths* at the Festival; Dame Barbara Monroe, ex Chief Executive of St Christopher's Hospice; Dr Andrew Thorns, Consultant in Palliative Medicine at Pilgrims Hospice, Kent; Doctor Paul Davies, Reader in Philosophy at the University of Sussex; and Dr Andreas Hiersche, Lead Clinician Palliative Care, Brighton and Sussex University Hospitals Trust.



The debate will be chaired by Bobbie Farsides, Professor of Clinical and Biomedical Ethics at BSMS.

**Sun 22 May, 4pm. £8
Brighton Dome Corn Exchange**

Every child is different – Brighton Fringe

Did you know a silent revolution is happening in medicine? Join BSMS for a fun day of games and activities to explore how genes work. Find out how healthcare designed for each of us, as individuals, could be better than the traditional 'one-size-fits-all' approach.

**Sun 22 May, drop in between 10am-4pm. Free.
Sallis Benney Theatre,
University of Brighton,
Grand Parade,
Brighton**

Sept

"For services to psycho oncology." Psycho what?

There has been a transformation in cancer treatment and people are living longer than ever with the disease. But what are the implications of this for their quality of life? Professor of Psycho-oncology at BSMS and Director of SHORE-C, Dame Professor Lesley Fallowfield was recently awarded a DBE for her work in psycho-oncology. In this talk she will discuss her team's research, explaining why it's crucial in a world where many cancers are now considered a chronic condition.

**Sept – date TBC. Free.
See bsms.ac.uk/events for details
Brighton and Sussex
Medical School**



Pulse

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