# Prognosis

**The periodical of the Harley Street Medical Area** Issue 10 / 2022

**Tried and tested** Why drug trials are so important to both the medical sector and the patients who participate

**The big interview** Dr Annalisa Jenkins offers her prescription for effective leadership

**Ageing gracefully** Why we need a new way of thinking about our ageing population

Healthcare in the climate crisis The fight for cleaner air



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Audiology goes way beyond hearing aids. We have two ears and one brain and the brain plays a very important role in the way we communicate. Improving hearing is not just about amplification, it's about understanding the individual needs of every patient.

Adam Shulberg of Cubex





Julian Best, executive property director at The Howard de Walden Estate, on the welcome return of in-person events, the growing focus on life sciences, and some welcome developments within the HSMA

HSM

Arab Health is the biggest health conference in the world and represents a fantastic opportunity for the HSMA brand as a whole and the operators who practice here to showcase their services to a worldwide audience.

As we all continue to find ways of doing business in the post-COVID world, one of the most welcome developments has been the ability get out and meet people again. It was a real pleasure seeing old friends and colleagues at the recent Harley Street Medical Area health forum. In that spirit, it is wonderful to be going back to Arab Health for the first time since 2020. This is the biggest health conference in the world and represents a fantastic opportunity for the HSMA brand as a whole and the operators who practice here to showcase their services to a worldwide audience.

At Arab Health, the HSMA takes a stand in the UK Pavilion with space for the multiple 'partners' who attend the event under the HSMA umbrella. For the upcoming conference, the HSMA will have the second largest presence in the pavilion, sited alongside the stand jointly hosted by the Association of British Health Tech Industries (ABHI) and the Department for International Trade.

We are working extremely hard to ensure that all HSMA partners will get maximum value out of their trip to the conference. Our team is already working on delivering significant levels of prepromotion, working alongside ABHI which always generates excellent PR leading up to the conference. As part of our offering, we will also be facilitating networking events in Dubai. There will be our own drinks reception, which provides a place for partners to network with other companies and each other. HSMA partners will also get access to the drinks reception hosted by ABHI as well as an invitation to the reception





# HEALTHCARE CONFERENCE

# A GLOBAL HUB FOR LIFE SCIENCES

WEDNESDAY 19 OCTOBER 2022 8:45AM-5:30PM

THE ROYAL SOCIETY OF MEDICINE Organised by The Howard de Walden Estate

held at the British embassy. Past attendees have used the conference as a base to visit other emirates to attend meetings planned to coincide with the conference.

The idea is to provide the framework and opportunities for HSMA operators to set up their own meetings with other countries, operators, concierge services and health attachés to develop opportunities for oversees operators to refer their patients to the HSMA.

Another event that we are very excited about is the healthcare conference we are hosting at the Royal Society of Medicine on 19th October. London: A Global Hub for Life Sciences is a one-day conference to discuss global trends in the life sciences market and their impact on London's evolving healthcare ecosystem. The conference will be opened by the Rt Hon Lord Kakkar, then through the day industry leaders like Professor Sir Robert Lechler, Professor Tony Young, Dr Annalisa Jenkins and Sir Jonathan Symonds will lead debates on different aspects of the life sciences. A key subject will be how London can

Our aim is to bring together the existing medical specialisms, research facilities and universities to create a hub of life science research that complements the HSMA's excellent medical services.

make use of its world-class healthcare reputation to become a major player in what is a fast-developing sector. It is sure to be a highly engaging and informative day for everyone involved.

Life sciences is an area we are taking a serious interest in at The Howard de Walden Estate, and over the past couple of years we have undertaken a significant amount of work investigating the possibility of bringing more medical research work to the HSMA area. Life sciences research covers a wide spectrum, including data science, genomics, medical technology and clinical trial research. There are already several clinical trials taking place within the HSMA, and we have world-class university research hospitals like University College London Hospitals, King's College Hospital and Imperial College Healthcare close by. For some of our operators, including The Mayo Clinic and Cleveland Clinic, research is a key part of their current model, and we know that a number of others want to become more involved in undertaking research. Our aim is to bring together the existing medical

specialisms, research facilities and universities to create a hub of life science research that complements the HSMA's excellent medical services.

Elsewhere, it has been another busy few months across the HSMA. The Harley Street Business Improvement District (BID) went live on 1st April 2022. The BID allows stakeholders to contribute to strategic development plans in four key areas: public realm and wayfinding; national and international marketing opportunities; business sustainability and connectivity; and safety and business development. This is a very exciting arrival which will help the area grow into a sustainable, secure and globally recognised destination for residents, businesses and investors.

Finally, those of you familiar with the area may know that we recently temporarily relocated our headquarters to Baker Street while our headquarters at 23 Queen Anne Street underwent significant renovations. I am delighted to say the project, designed by Morrow + Lorraine, won Best West End Regeneration/Redevelopment at the OAS Development Awards. The judging panel wrote: "The refurbishment of 23 Queen Anne Street is remarkable, delivering a contemporary, environmentally focused and high quality scheme behind a period stone facade. The design has successfully taken inspiration from the history of the building with the materials and finishes complementing the detail and heritage. "It is a lovely building to come to work in, and it is gratifying to know that through the hard work of many people it is playing its part in ensuring that the fabric of the estate continues to provide the kind of spaces that businesses need in our dynamic corporate landscape.

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# **EXPERIENCE THE BEST OF UK HEALTHTECH AT MEDICA 2022** 14-17 November 2022

ABHI and the Department for International Trade are co-hosting the UK Pavilion at MEDICA 2022. Join us at the world's largest event for the medical sector, where we are launching the first *UK Presentation Area*, with over 40 companies showcasing the best of UK content and case studies.



# NEWS

The Harley Street Specialist Hospital (HSSH) has opened a dedicated pain management clinic. The consultant-led clinic has 14 highly experienced pain consultants available to treat specialist areas, including pain injections and management, spinal surgery, wisdom tooth extraction and oral pain, with the ability to cross-refer within the hospital depending on the needs of the patient. HSSH pain experts focus on conservative management and treatment pathways and will treat both acute pain (triggered by another condition, or because of trauma or injury) and chronic pain (lasting three months or more).

hssh.health

Arab Health, the largest healthcare exhibition and conference in the Middle East, is taking place from 30th January-2nd February 2023 and Howard de Walden is pleased to confirm that the HSMA collective will be returning to the event for the sixth time. The team, which will include representatives of several of the area's top clinics, will showcase their medical excellence on the HSMA stand within the UK Pavilion. Several members of the collective will also be talking at congress as part of the event.

arabhealthonline.com

For tius Clinic



King Edward VII's Hospital has added genetics testing to its offering. The new service supports patients by identifying the genetic risks of developing breast cancers. A DNA test, used to identify genetic mutations such as BRCA, can deliver peace of mind or enable patients to make informed decisions about their future lifestyle and healthcare. The facility provides counselling before the testing. Once the tests have been completed, further counselling is offered to help patients manage the impact of the results. The genetics team offers practical support throughout the process to help individuals plan for any required followup treatment.

kingedwardvii.co.uk

Mayo Clinic Healthcare has expanded its slate of advanced cardiac imaging tools to include transoesophageal echocardiography, which provides immediate, accurate and cost-effective diagnostic information about the heart. Using a thin scope that accesses specific internal views of the heart via the oesophagus, clinicians are able to view moving images of the patient's beating inner heart. The images generated by the procedure can be used for diagnosis and for the detailed planning of therapies. This imaging method complements other heart imaging tools used at Mayo Clinic Healthcare, such as transthoracic echo, exercise stress echo, CT scan and cardiac MRI.

mayoclinichealthcare.co.uk

The London Clinic has announced a partnership with Datar Cancer Genetics to provide precision oncology-based solutions. Datar Cancer Genetics, which has a state-of-the-art lab facility in Surrey, specialises in non-invasive, molecular and cell analysis-based techniques for screening, diagnosis and management of cancer. Lina Patel, head of cancer services at The London Clinic, said: "Our partnership will provide an excellent platform to offer precision personalised medicine, leading to more patients surviving and hopefully thriving for many years post-treatment. It's through partnerships like this, with best practice shared openly, that the global heath community will advance clinical excellence."

thelondonclinic.co.uk

Fortius Clinic, a sports injury clinic in the HSMA, has renewed its official partnership with the Rugby Players Association (RPA). The RPA, which represents more than 800 current rugby players and more than 400 former players, supports members through their careers and the transition to retirement from professional sport. Damian Hopley, the RPA's CEO, said: "This partnership is vital to the success and long-term health of our members. The challenges for players leaving the game they love are well documented and the support of the world-leading specialists at the Fortius Clinic gives our past and present players the medical expertise they need to transition to life after rugby."

fortiusclinic.com

Schoen Clinic UK, which creates peerreviewed clinical research on eating disorders and offers a holistic service for patients, has announced a partnership with eating disorder charity Beat. Working both nationally and locally, the charity helps patients and their families to understand their illness and move towards recovery. It also trains professionals and campaigns for better government policy and health services. The Schoen Clinic partnership will seek to drive necessary education, guidance and fundraising initiatives and make sure everyone has access to the treatments they need.

schoen-clinic.co.uk



# **CRYSTAL BALL** Sinusitis

Mr Kalpesh Patel of London ENT Clinic on the evolution of treatments for sinusitis

# State of play

The sinuses are a group of four cavities above, below, between and slightly behind the eye sockets. They produce mucus that drains out of narrow channels into the nasal cavity. Sinusitis is inflammation of the mucous membranes that line the sinuses. Sufferers can be broadly divided into those with recurrent acute sinusitis, and those with chronic sinusitis. Recurrent acute means the patient has four or more separate episodes in a 12-month period. Chronic sinusitis involves more than 12 weeks of continuous symptoms such as blockage, discharge, facial pains, congestion and headaches. For those with recurrent acute sinusitis, I will often have their immunity assessed by a clinical immunologist to ensure that their underlying issues are not immunological. For those with chronic sinusitis, I assess any anatomical problems preventing natural drainage of mucus.

I often recommend cone beam computed tomography to assess the sinuses. This uses a fraction of the x-ray dose of standard CT imaging. I will also see if underlying allergies are playing a significant role. I frequently involve my allergy colleagues in assessing whether the patient could be helped by immunotherapy or desensitisation. I ask patients if they've had associated symptoms like asthma or eczema or if they're sensitive to aspirin. Unless contra-indicated, I will usually prescribe steroids (topical and oral), antihistamines and an antibiotic for a continuous period of two months, which will often resolve the problem and remove the need for surgery. If the patient has persistent symptoms, and depending on how severe they are, I'll decide on whether the next stage is endoscopic sinus surgery.

### On the horizon

There are a number of complex pathways by which the process of inflammation occurs, which can involve molecules like interleukin and histamine. Looking further ahead it may be possible to avoid the development of inflammation by blocking the provocative agents which set off the inflammatory process from locking onto receptors in the nasal mucosa. Something else that is theoretically possible is medications that would only work where they need to work something that would treat sino-nasal inflammation and blockages at the location, rather than a drug that goes

One interesting advance that is still being evaluated is a new group of monoclonal antibody-based drugs. While these are still new, some really promising results are being seen.

through the body, gets metabolised by the liver before reaching the sinus, and therefore also has an effect on other parts of the body, with potential sideeffects. Hopefully some very targeted drug treatments delivered through nasal sprays over a period of time that cure the symptoms and inhibit the further development of the disease will be realised in the near future.

# In the distance

One interesting advance that is still being evaluated is a new group of monoclonal antibody-based drugs. The main one that been licensed for use in patients with chronic sinusitis and polyps is called Dupilumab. These drugs, known as 'biologics', are being used for patients who have severe sinusitis with polyps associated with allergy and particularly with aspirin sensitivity. While these are still new, some really promising results are being seen.

In terms of surgery, I think the main advance we are seeing is the use of 3D-imaging surgical systems. These give surgeons the ability to perform the operation with more accuracy and avoid trauma to neighbouring critical structures such as the eye and brain. I also have no doubt that we will be able to put on a pair of VR goggles, combined with 3D image guidance and actually see the sinuses in three dimensions right inside the patient's head during the procedure.

London ENT Clinic 51 Harley Street London W1G 8QQ 020 7262 0297 londonentclinic.com

# HARLEY STREET HERO Sir Stewart Duke-Elder 1898-1978 Ophthalmologist and writer

Words: James Rampton Image: National Portrait Gallery, London

When she was serving as prime minister, Margaret Thatcher famously lived by the motto: "Sleep is for wimps." While her cabinet colleagues would struggle to keep up, Mrs Thatcher could survive – and indeed thrive – on only four hours' sleep a night. The acclaimed surgeon Sir Stewart Duke-Elder, who is widely viewed as the founder of modern ophthalmology, was equally driven. Early in his time as a medic, he learnt to get by on far fewer hours of sleep than the rest of us mortals require.

His fellow doctors were in awe of his tirelessness. In the 1995 edition of Survey of Ophthalmology, his longstanding colleague and friend Sir Stephen Miller wrote: "Stewart on two or three nights a week would begin writing at his desk after an evening meal, work through the night until six in the morning, sleep in his chair for an hour, then have a bath and a change of clothing, when he was ready to begin another day as chirpy and as lively as a cricket."

This indefatigability came in very handy during Duke-Elder's prolific and highly distinguished medical career. His astonishing reserves of energy were especially useful when he authored a host of ground-breaking textbooks, the greatest legacy he has bequeathed to the medical world.

Between 1941 and 1954, he wrote every single word of the world's first reference book in his speciality, the seven-volume Textbook of Ophthalmology. For this work, the Medical Society of London awarded him the Fothergillian Prize for "the best contribution to the whole of British medical literature for the current



decade". Realising within four years that his epic work already needed updating, the extraordinarily diligent surgeon wrote the seminal 15-volume System of Ophthalmology between 1958 and 1976.

Notable for their dazzling intellectual range and excellent use of the English language, these books are still hailed as the pioneering works in the field. They have helped cement his reputation as one of the finest ophthalmologists of the 20th century.

Born in Dundee in 1898, Duke-Elder won a scholarship to St Andrews University and, in 1919, he gained an MA with first-class honours in natural sciences. An enthusiastic participant in both rugby and motorcycle racing (two activities modern surgeons might not wholeheartedly recommend!), he qualified as a doctor in 1923. He went on to become an esteemed consultant ophthalmic surgeon at both St George's and Moorfields Hospitals in London. For more than 40 years, starting in 1934, he both lived and worked at 63 Harley Street.

In 1933, Duke-Elder's fame reached new levels when he received a knighthood for a successful operation on the glaucoma of the former prime minister, Ramsey MacDonald. He also spent 29 years as ophthalmologist to the Royal Family, treating Edward VIII, George VI, and Elizabeth II.

Perhaps the crowning glory of his career, however, came in 1957 when he won the Lister Medal for his contributions to surgical science. Delivered on 28th March 1958 at the Royal College of Surgeons of England, his brilliant Lister Oration was entitled "The Emergence of Vision in the Animal World."

The speech closed with a memorable passage warning that, despite the fact that over the last 10 million years "the brain of the ape-man has expanded threefold in volume", we should not assume that all advances in the future will be positive: "In assessing the potentialities of human progress in the next 10 million years, or indeed of human survival, we must remember the snag that the apes threw sticks and stones while we throw atom bombs." Thanks to his outstanding talents as a writer and a surgeon, Sir William Duke-Elder, who passed away in 1978, is quite rightly regarded to this day as a truly visionary ophthalmologist.

Going against the contemporary stereotype of the unsmiling, haughty surgeon, especially one who had been surgeon to three monarchs, Duke-Elder was also blessed with a terrific sense of humour and a tremendous bedside manner. The following comes from the account of a glaucoma patient in Survey of Ophthalmology in 1987 who been treated by Duke-Elder for more than 15 years. She recalled her first surgical experience with him and his colleague, Mr Goldsmith: "Sir Stewart came forward as I was wheeled into the operating theatre, bent over my tense person saying kindly, 'I am here to hold your hand!' And he did throughout the 30 minutes' operation on the left eye. At one point, I spoke: 'Will I be able to roll my eyes again?

"'Indeed, yes!' Sir Stewart, seated at my left side and holding my hand, replied. 'At your husband and at Mr Goldsmith!""



# HOW DOES IT WORK? Balloon angioplasty

Professor Thomas Lüscher of London Medical on a procedure to combat coronary artery disease

Interview: Viel Richardson

Coronary artery disease – a narrowing of the arteries supplying the heart muscle, which can lead to chest pain and eventually heart failure – is the main target of balloon angioplasty. However, the procedure can also be used to treat narrowing in the iliac arteries and other arteries of the legs. In addition, it is now sometimes being used in the carotid artery that supplies blood to the brain as a way of preventing stroke.

In 1977, Andreas Grüntzig at University Hospital Zurich developed the balloon which is the basis of all balloon angioplasty. It took the form of a thin, elongated, hollow tube made to be the size of the blood vessel, like a sausage. Following a guide wire, we insert the deflated balloon into the narrowed artery we're seeking to open, then inflate it up to a pressure of 10 to 12 atmospheres. Such high pressures are needed because the narrowing is caused by lesions from built-up plaque. These lesions can become calcified, making them guite hard, a condition called atherosclerosis. To restore optimal blood flow, we need to fracture the lesion, but without rupturing the blood vessel.

With the early procedures, there was a significant risk of causing ruptures of the inner lining of the artery, called 'dissection', when the balloon was inflated. This can lead to pieces of the arterial tissue and pieces of the lesion floating free within the artery, which can result in an occlusion – a sudden blockage of the artery. This complication could lead to the need for emergency bypass surgery. In the mid-1980s it was shown that attaching stents to the outside of the balloon solved the problem. At first, these were quite bulky but they are now thinner and more flexible. Now we see over a 90% reduction in the rate of occlusions when a stent is in place.

Stents are metal meshes that are crimped around the outside of the balloon. When you expand the balloon this mesh, usually made of stainless steel, helps even out the pressure. The balloon inflates evenly as it presses

Optical coherence tomography A non-invasive medical imaging technique, in which light waves are projected onto a target and the reflections analysed to create high-resolution images. mTOR The system with which the body regulates cell proliferation. Utilised in angioplast y to slow the formation of new scar tissue. Acute stent thrombosis The rapid formation of ablood clot on the wall of ablood vessel.

#### **Balloon angioplasty**

Plaque build-up causes the arteries to narrow and restrict blood flow.



Once in place, the balloon is inflated to a pressure of between 10 and 12 atmospheres



The guide wire is removed, and the stent is kept in place, restoring normal blood flow.

into the artery, making it easier for the surrounding tissue to bind to it. Initially the occasional stents did come adrift but with advances in technology this is now extremely rare making balloon angioplasty a very safe procedure.

For the procedure itself, we first carry out a coronary angiogram which involves injecting a contrast medium. This allows us to watch the blood flow through the system on an x-ray machine and see the narrow areas. The angioplasty itself can be done using local anaesthetic and a mild sedative to relax the patient, though I have had patients who have watched the whole procedure, as it is generally painless.

We create an entry incision, usually into the wrist artery at the base of the thumb. We then feed a guide catheter into the aorta, which is the main blood vessel supplying the body. We feed in the balloon using a guide wire that follows the course of the culprit artery. If necessary, we can also feed in a device through the catheter that measures the pressure gradient across the lesion and tells us very accurately the extent of the restriction. There is a technology called optical coherence tomography (OCT) with which we can image inside the blood vessel if needed, but usually we can get a very accurate idea of the size and length of balloon we need with the coronary angiogram before the procedure.

The vast majority of procedures go very smoothly, but sometimes there will be issues. Some arteries can prove very torturous to navigate, with sharp twists and turns to get around safely. Sometimes the artery is so calcified that it's very difficult to open it up, even with the balloon. For this situation we now have balloons that can produce shockwaves to crack the calcium. We even have catheters with diamond tipped metal heads that can rotate at 30,000 rpm and drill through a calcified lesion. Sometimes access to the artery through the wrist is very difficult for anatomical reasons. In those cases, we use the femoral artery in the groin.

You only actually need the stentto remain in place until the artery is healed. After that it would be great if it could disappear somehow. There have been attempts to design stents that are reabsorbed into the body, but so far these have not been successful.

Whenever you have an injury there is scar formation and it is the same here. This can lead to restenosis, when the scar tissue leads to a new narrowing of the blood vessel. To prevent this, we cover the balloon or stent with drugs that activate the mTOR system in cells to inhibit the cell growth and prevent this scar tissue forming.

We also prescribe medication to avoid acute stent thrombosis, which is another issue that can lead to clots within the stent and acute coronary occlusion. To avoid this, the patient has to take aspirin or other medications that inhibit the blood's desire to clot around an injury. This is extremely important for six to 12 months after the procedure.

Finally, the patient will need cholesterol blockers, because the main cause of the initial coronary artery disease is high cholesterol. Your lowdensity lipoprotein (LDL) needs to stay extremely low to avoid any recurrence in the years to come. The positive thing is that this is not just a function of medication – with the right changes to their lifestyle, the patient can keep their LDL levels low, hugely reducing the chances of the condition returning.

#### London Medical

49 Marylebone High Street London W1U 5HJ 0808 239 1352 *londonmedical.co.uk* 



I see more chronic fatigue patients than anything else. I don't like the term 'chronic fatigue', though – it's post-viral fatigue, a disordered response to a virus that results in fatigue, which is essentially what long COVID is.

You can now detect diseases at the very earliest stages – before they cause symptoms – which means there's a much higher chance of instituting effective treatment or curing them.

The London Endocrine Centre 68 Harley Street London, W1G7HE 02073232755 Jondonendocrinecentre.co.uk



# PROFILE OF A PATHOGEN Leptospirosis

There are more dangerous bacteria. Ones that are higher up the 'scare you witless' scale. But leptospirosis is on the rise. The reason for concern is that it jumps between species with alarming ease. Host species include domesticated animals such as horses, cattle, pigs, dogs and rodents. The problem is that when infected, many of these show no symptoms of disease at all.

In humans it can be a very different story. Leptospirosis usually presents in two phases. In the first, lasting between four and nine days, the patient experiences a sudden onset of severe headache, chills, muscle aches and vomiting. But it is in the second phase where things can become very serious. It does not often occur, but when it does the patient develops fever, jaundice, abdominal pain and diarrhoea. In severe cases they can suffer kidney failure, liver failure, meningitis or any combination of the three. If untreated, it can take several months for patients to recover and some don't recover at all, as it proves fatal.

Leptospirosis is spread through the urine of infected animals. It can get into water, soil or households and survive there for weeks or months. Infected animals can continue to excrete the bacteria continuously, reinfecting the local environment for months or even years while showing no ill effects themselves.

As well as through close contact with these animals, infection has also been associated with swimming, wading, kayaking and rafting in local waters. As such, it is a recreational hazard for campers or those who participate in outdoor sports. The risk is likely to be greater for tropical or temperate climates but is not confined to them. In addition, the incidence of leptospirosis infection among urban children appears to be increasing.

The great majority of patients recover without the disease progressing to phase two, but enough go on to develop serious disease to make a lack of access to a simple test a worry. Confirmation of suspected leptospirosis is usually done through culturing the bacteria or testing for antibodies with the microscopic agglutination test. Both techniques require well-equipped laboratories with experienced staff. While rapid tests for humans are available, these are mainly for screening purposes and results must be confirmed by the standard tests. The problem is that the disease thrives in hot, wet

Microscopic agglutination test Widely used as the reference test for leptospirosis antibody detection. It is done by mixing serum from a patient with different serovars of the Leptospira bacterium to see whether an antibody reaction takes place.

Jarish-Herxheimer reaction A reaction caused when lipopolysaccharide molecules are released by the death of harmful microorganisms during antibiotic treatment, which can cause local dangerous levels of inflammation. **Relapsing fever** A bacterial infection that can cause recurring bouts of fever, headache, muscle and joint aches, and nausea.

places which often dovetail neatly with populations where such facilities are rare, if they exist at all.

Early diagnosis is critical in the treatment of patients with leptospirosis. For less severe cases, oral antibiotics such as amoxycillin are effective treatments. But in severe cases high doses of intravenous penicillin are recommended. However, this treatment risks Jarish-Herxheimer reactions where patients can develop syphilis, Lyme disease or relapsing fever.

Given the ease of infection and the near global spread of the disease, developing systems for identifying and tackling outbreaks is key. A small percentage of a large number still equates to a great deal of human suffering. Prevention of transmission can be achieved by wearing protective clothing and other barrier methods, and prophylactic treatment with drugs such as doxycycline is protective to some extent. While vaccination is available, it is not currently considered as a generally applicable option.

As the effects of climate change on weather patterns become ever more apparent, and as leptospirosis outbreaks regularly occur in the wake of hurricanes and floods, its spread is only going to increase. On the face of it, leptospirosis is not a disease to keep you up at night, but there is the ease with which it jumps species to consider. As we have all too recently been reminded, it just takes a small crossspecies mutation for that situation to escalate very quickly indeed. When it comes to leptospirosis, that old public health adage rings true: prevention is very much better than cure.

PLUS BY APN Interventional Psychiatry and Integrative Therapy

# COMING SOON



# **HOW TO... Deal with gum disease** Dr Reena Wadia, founder and principal specialist periodontist at RW Perio

Interview: Daphne Power

# What are the causes of periodontal disease (gum disease)?

The main cause is bacteria that attaches itself to your teeth. The gums don't like it, so they start bleeding. Many people ignore bleeding from the gums, but you shouldn't. Bleeding means something is not right. As well as bacteria, there are other factors that can aggravate gum disease, or make you more susceptible to it. Medical conditions such as diabetes can have a role, especially if the diabetes isn't well controlled. Stress levels can also affect your whole body, including your gums, and genetics can play a part too. Some people are just more susceptible to gum disease than others and it can run in the family. Lifestyles factors also play a part; smoking for instance - the more you smoke the worse it can be. Pregnancy, certain medications, and any medical conditions that affect your immune system can impact upon oral health.

# What are the most common types of gum disease?

Gingivitis is gum disease that affects the layer of the structure surrounding the tooth, causing irritation, redness and swelling of your gingiva, the part of your gum around the base of your



teeth. If it becomes more serious it's called periodontitis, which damages the bone supporting the teeth as well as the soft tissue, and this can cause irreversible damage. Without treatment, the alveolar bone around the teeth will gradually erode.

#### Are there types of gum disease that are not caused by poor dental hygiene?

The main trigger for gum disease is the bacteria itself, so dental hygiene is essential, but those other risk factors may be relevant. With diabetes for instance, it's all about the control. If your diabetes is very well controlled and your general health is good, your potential risk will be decreased. Interestingly, if you have diabetes, you're more likely to get gum disease, and if you have gum disease, you're more likely to get diabetes. So, it's a two-way relationship.

# What are the signs of gum disease that people might miss?

Bleeding tends to be ignored or dismissed. Any bleeding is a sign that's something's not right and it's there to draw attention, so don't ignore it. Other signs are swelling of the gums, teeth changing position, bad taste, bad breath, and gaps opening up between teeth because there is less bone around the tooth than there was before.

# How are the common types treated?

The first step is having good home care. At our clinic we give everyone a bespoke regime on how they should look after their oral health. It's different for every person but the key factors are using a rechargeable electric toothbrush twice a day, cleaning between your teeth by flossing, or using interdental brushes, and regular professional hygiene care.

We offer a treatment called Polish and Perfect with our advanced hygienist. We do an assessment, go through a tailored oral hygiene regime, disinfect the whole mouth and do airflow polishing. If there is gum disease, we disinfect the gum pockets that have opened up, clear out the bacteria that's attacking the jaw bone, then seal these back up.

# Are there ways people can check at home?

You can look out for the signs, but really the only way to fully diagnose gum disease is by seeing a dental professional who will measure your gums and look at your bone levels. This does highlight the importance of going for regular check-ups with your dentist or hygienist. The regularity for that depends upon the patient's risk.

#### What can people do in their everyday lives to prevent gum disease?

Gum disease can affect anyone, and the risk is not defined by a certain age group or population type. Home care is key, good nutrition, having a healthy lifestyle, managing stress levels, exercising, making sure you're generally looking after yourself and of course, regular check-ups with your hygienist and dentist.

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# A DAY IN THE LIFE Adam Shulberg

Senior audiologist and managing director at Cubex

Interview: Daphne Power

Audiology goes way beyond hearing aids. We have two ears and one brain and the brain plays a very important role in the way we communicate. Improving hearing is not just about amplification, it's about understanding the individual needs of every patient.

My father was an audiologist too. He founded Cubex in 1964 and did a lot of audiological work all around the world. I accompanied him for much of this and fell in love with it. My first full-on experience was working in a school for the blind and deaf in the jungles of Sri Lanka. It was very special, heart-warming work, seeing children come along for the very first time and be stimulated by the world and each other. It was something that cemented my passion for audiology.

On a day-to-day basis, it's important for me to spend time at home with my joyful two-year-old daughter, before arriving at the clinic around 10am. Then it's pretty much full-on throughout the rest of the day, with consultation and discovery assessments with patients with reduced hearing sensitivity, and those with tinnitus. We have wax removal clinics here as well - we have a wonderful wax removal solution. My day involves consulting with patients and then personalisation of treatment. This may be the provision of specific hearing technology, suggestions and support with the start of their cognitive training, or perhaps both.

I have a fantastic team of audiologists, neuroscientists and wellbeing experts

who share my passion for a multidisciplinary approach to individual patient care. At the forefront is my wife, Jerusha Shulberg, our audiology training manager, clinical mindfulness teacher and director of innovation. She delivers our hugely successful treatment programme, CALM, a 30-50-day programme based around cognitive skills, needs and challenges. She has had remarkable success with people with Meniere's disease - a disorder of the inner ear that can lead to vertigo and reduced hearing sensitivity - particularly for those who perhaps haven't wanted to confront the anxiety and stress which accompanies the disease.

Measuring cognitive skills is an important part of our assessment. As you lose hearing, particularly in later



With reduced hearing sensitivity, there is a lot that happens that goes beyond the supply of hearing aids. If you can't engage with the people and things that are going on around you, it becomes easy to fall into the trap of avoidance.

life, working memory and executive function can be challenged, which can feed into the hearing problem. A typical response to hearing loss is to find ways of coping, relying upon focus and memory. If you've missed parts of what someone has said to you, particularly in group situations, you have to be flexible and agile. The conversation may change quickly from one person to another, requiring a huge effort to keep up, which can be exhausting. It can also cause friction in relationships because reduced hearing is a communication disorder.

With reduced hearing sensitivity, there is alot that happens that goes beyond the supply of hearing aids. If you can't engage with the people and things that are going on around you, it becomes easy to fall into the trap of avoidance. As social beings, it is important for us to be able to connect with one another; once we stop doing that, we become susceptible to isolation and cognitive decline. Hearing and cognitive function should never prevent you from having the choice to participate.

The initial assessment includes cognitive testing, such as the ability to remember, concentrate and focus. We consider anxiety and stress. We discuss any challenges, motivations and goals, and agree realistic expectations. Some patients aren't aware how hearing can relate to cognitive decline, so this an important part of our discussion. We encourage patients to engage in mindfulness, meditation and cognitive training. It's about supporting individuals to become self-sufficient, managing anxiety and shifting perspective. This opens the door to them becoming more discerning about how they cognise information. We want our patients



to feel better equipped with their cognitive resources so they can manage challenging situations

Then there is what we call optimisation. If you have seen the patient, identified their challenges, delivered the solution and made them aware of the limitations, then optimisation should be quite subtle. The technology we use is incredibly sophisticated and almost all of it is digital, which means we can programme it, personalise it and optimise it according to the patient's needs.

Patient experience is very important. What equipment have they been using? What have they been using it for? We want to ensure it is a smooth transition, not for the ears but for the brain. Someone who hasn't been as involved in social activities for a while due to their hearing loss may need extra support, as when they do re-engage, the brain will initially feel overwhelmed.

Typically, audiologists use audiograms to measure hearing sensitivity. We believe that is just the starting point. The fact that you measure someone's hearing sensitivity doesn't necessarily suggest how they are going to respond to amplification, nor how they are going to discriminate speech. When we're personalising the technology and treatment, we are looking at the patient's age, cognitive skills, communication networks, work, social life – all of the aspects that need to be considered.

Alongside our digital technology we also have an analogue solution - an extended-wear device called Phonak Lyric that can remain in place for up to three months. You wear it all the time: in the shower, doing exercise and sport, while sleeping. Aside from the hearing aspect, which never switches off, it's a very interesting solution for patients suffering from tinnitus. There is the cosmetic aspect as well because once it's in place, it can't be seen. I have also used it on patients who may have early onset dementia and dexterity issues, as we can position it so that they don't need to touch it.

For those patients who find it difficult to travel to us we can offer a hybrid programme, and in fact, some patients prefer that any way. If the hearing technology is connected to their smartphone, we can access their hearing aid remotely and make the appropriate changes. Hybrid care is something we are now pursuing more and more. The technology was already there, but no one did very much about it until COVID. Most clinics have gone back to in-clinic care, and we have mostly, but there is still a strong case for hybrid care.

We see patients from 19 years upwards, from all over the world, all demographics, and we have a broad spectrum of clinical offerings, which we deliver in a mindful and relaxing environment, both in the clinic and online. As we move forward, we see ourselves more and more as a wellbeing friend, considering, responding to and treating the individual needs of the patient as a whole. Hearing is just one part of communicating, and we all communicate in different ways. We believe in treating the person, not the condition, always striving for better quality of life overall.

#### Cubex

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**BUSINESS IMPROVEMENT DISTRICT** 

# **THE HARLEY**BUSINES **STREET BUSINES**IMPROVEMENT DISTRICT

The Harley Street BID has been established to promote the area and represent the exciting mix of businesses here.

In November 2021 the business community were invited to vote in the ballot to develop a business improvement district and there was an overwhelming "yes" for a BID to be established from the businesses. The BID term runs from April 2022 to March 2027. With the investment that will be made through the BID this provides opportunities to deliver projects across the key themes which are set out below.

# **STRATEGIC THEMES**

Our next steps involve identification and project delivery, looking at key priorities and setting our steering groups with key partners. Our 4 steering groups are set out below and we will have a specific medical group to ensure we acknowledge and deliver opportunities for all businesses.



# **GET IN TOUCH**

If you would like more information on the newly developed business improvement district please do not hesitate to contact Nicki Palmer. Email: nicki@harleystreetbid.com Telephone: 07944 386903.

Follow us on social media: 🧐 @Harleystreetbid 👘 Harley Street Business Improvement District 🥂 www.harleystreetbid.com

# NEW KIDON KIDON THE BLOCK Kate Farrow, director of operations at King Edward VII's Hospital, on the hospital's newly opened, state-of-the-art outpatient medical centre

Interview: Ellie Costigan

Tucked away discreetly on Beaumont street, across from the main hospital, sits our cutting-edge diagnostic and outpatient centre, the King Edward VII's Medical Centre. We were very excited to welcome our first patients to this new facility in January this year.

As an operations director, it's natural to prime yourself for all the things that might go wrong, especially since we opted for a full-scale opening rather than the softer phased opening that you might normally expect of a facility of this scale and complexity. We chose this approach due to staffing and equipment limitations, but those terrible phone calls never arrived, and I think that was down to our careful planning. We had an excellent in-house team that worked alongside a professional project team, and they looked at every operational and clinical aspect in detail. We started to plan the operational opening of the centre six months in advance, so by January everyone was familiar with the building and ready to go.

Of course, there were hiccups along the way, such as moving the location of our mammography equipment and so having to reinforce the floor, but these were all identified and rectified prior to opening. There were also delays due to COVID. Because of the restrictions, everyone had to socially distance, meaning fewer people could be on site, which naturally slowed things down. However, as we got through the worst of the pandemic, we were able to get back to full speed again.

We treat patients from all over the world, and even COVID did not put a stop to that. We switched from in-person to virtual consultations, which worked well, but we are back to in-person appointments and expect to welcome upwards of 45,000 patients this year.

The new centre has increased our outpatient provision and enabled us to expand our clinical services. Each floor is dedicated to a different speciality, which has allowed us to equip, orientate and stock the rooms with the specific requirements of each service in mind. This allows us to work more efficiently. Having the majority of our outpatient services under one roof also means that consultants don't have to send patients across the road for consultations or services, which greatly improves the patient experience.

Coming out of the pandemic and being able to open such a stunning facility has really boosted staff morale - our staff feel proud to work here and to have been part of the transformation. Many of the improvements and efficiencies have been a direct result of careful engagement with consultants, staff and patients.

It is such a spacious, lovely building that our patients feel very welcome and safe in. It's comfortable: King Edward VII's Hospital is known for making patients feel welcome - that's something we're very proud of - and we have always had a great reputation in terms of our expertise and the service we offer, but we now have a beautiful new building to support the outstanding care we provide. Private patients do tend to follow their consultants, but as an organisation we are lucky to have such patient loyalty, often having patients refer family members and friends.

Our new centre will enable us to further drive innovation and expand and develop existing services. The next phase of redevelopment will be in the main hospital, where we have already built a brand new operating theatre. It has been a busy few years, but we have more exciting plans ahead.

King Edward VII's Medical Centre 54 Beaumont Street London W1G6DW 0207467 4344 *kingedwardvii.co.uk* 





Coming out of the pandemic and being able to open such a stunning facility has really boosted staff morale – our staff feel proud to work here and to have been part of the transformation.





Prognosis-25

# HEALTHCARE IN THE CLIMATE CRISIS

The global impact of climate change on healthcare – and vice versa – is vast. In this series, experts from within the diverse community of the Royal Society of Medicine offer their unique perspectives

# THE FIGHT FOR CLEANER AIR

Professor Maggie Rae, president of the RSM's Epidemiology & Public Health section and the UK Faculty of Public Health, and Dr Neeraj Shah, a respiratory registrar and president of the RSM's Respiratory Medicine section, explain why the quality of the air we breathe should be a matter for public debate

# Dr Neeraj Shah

On a simple level when you breathe in chemical pollutants they cause irritation and inflammation of the air ways and the tissue of the lung, affecting your lungs' ability to breathe properly. The purpose of breathing is to get oxygen and other gasses we need in but also to get carbon dioxide and other waste gasses out. Breathing polluted air affects your lungs' ability to do both. It also increases the risk of chest infections and over the longer term it leads to an increased risk of lung cancer.

We classify air pollution based on particulate size. The smaller the particle, the deeper it will reach into the respiratory system. As we go deeper into the lungs, the airways get smaller and smaller. The size of the particle depends on the source. The largest harmful particles that we can generally inhale are pollen and fungal mould spores. These only really reach the nose and the back of the throat. Symptoms will be similar to hay fever, including runny nose, watery eyes and coughing. They are unlikely to cause long-term damage, but cause real suffering and can be quite debilitating.

Medium-sized particles are produced by factories, cigarettes, and other products of fire such as soot. The trachea, our main windpipe, is a large tube which then branches off into ever-finer tubes as we get deeper into the lungs. Medium particles reach the mid-level areas of the lung. The most common thing this causes is chronic bronchitis – what we tend to think of as a smokers' lung disease. Sufferers will always be coughing and producing a lot of phlegm. They'll feel tight in the chest





We need to respect and protect our green spaces. These absorb carbon dioxide, support biodiverse ecosystems and give urban dwellers access to the many physical and mental benefits of getting outside.

and won't be able to breathe properly. We also know that some of these particles are related to lung cancer because of the ongoing inflammation they can cause over years.

Fine particles come out of cars and some come out of cigarettes as well. These get right down to our alveoli – the little balloons at the end of your lungs airways that exchange gases. These are what actually do the breathing. If we start destroying alveoli, we start to see lung capacity reduce and more incidence of lung cancer.

Finally, we have the ultra-fine particles that are mainly produced by diesel engines. These can pass through the alveoli and out into the bloodstream, which carries them throughout the rest of the body. The damage they cause at the moment is largely unknown because they can reach every organ. We know they can affect the heart and can cause strokes, but we still have much more to discover.

I often get asked if your lungs recover if you remove exposure to the pollutants. That depends on what the damage has been. With the larger particles, any irritation settles down over time. However, long exposure to fine particles can cause structural damage lower down in the alveoli and it's not possible to undo that. Everyone's lung function declines after a certain age, and exposure to polluted air speeds up the rate of decline. If you remove exposure to the pollutants, your rate of decline will eventually return to normal.

There is a lot we can do individually and it's really important that the public is engaged, but significant progress needs a global solution. I probably sound naïve, as this has been recognised at a United Nations level, but the commitment to driving real change I see in young people, people who will be tomorrow's decision makers, really does gives me hope.

### Professor Maggie Rae

The Faculty of Public Health has a long history of interest in climate change. As the world began to experience more frequent and intense drought, storms and heatwaves and see rising sea levels, melting glaciers and warming oceans, it seemed strange that we didn't speak out more. All of these things directly harm animals and destroy the environment, wreaking havoc on communities and people's livelihoods. We believe these things are going to damage the public health; therefore, it is legitimate that we speak out. That's why we declared climate change as a public health emergency in 2019.

Poor air quality is going to affect everyone's health. For some people the effects will be milder but for others they will be much more severe. There is the case of Ella Adoo-Kissi-Debrah from London, who in 2020 had air pollution officially as listed as a contributory factor to her death – the first time this had happened in the UK. She suffered from asthma and was constantly exposed to some of the poorest air quality in the country.

Good public health comes from basic things: clean air, clean water, access to open spaces to exercise. That's why this is a really important issue. We measure air quality through the Air Quality Index, which is used to communicate to the public how polluted the air in their area is. We need to be better at making the public aware of how easy it is to find that information. But equally importantly, we need to encourage them to use this information to hold governments and those responsible for improving air quality to account. Laws and guidelines are in place, so there are actions an informed member of the public can take. For example, many businesses have committed to being carbon neutral by 2030, so we need to make sure they are on track to do so.

There are several things we can do as individuals. The first is to make our concerns heard - if politicians think the issue important to the public they'll respond with action. We should also be eating less meat and dairy to reduce the environmental impact of their production. And do we need to fly everywhere? I work with people across the world who I've never met in person. Can you leave your car at home? Are other reliable forms of transport available? I'm a great fan of walking, it is so good for our health and is a lot more pleasant in clean air. Try to reduce your energy use. This reduces the amount we have to generate as well as saving on energy bills.

We also need to respect and protect our green spaces. These absorb carbon dioxide, support biodiverse ecosystems and give urban dwellers access to the many physical and mental benefits of getting outside. The Faculty of Public Health also believes organisations should invest their money responsibly. Here at the faculty, we opted out of funds invested in fossil fuels, and looked to create a more climate-friendly investment portfolio and we encourage others to do the same.

But it's not all doom and gloom. Around the world we are seeing a big movement for tackling climate change. When I talk to young people training in all the medical specialties, they are not only interested in health and healthcare; they're equally passionate about climate change because they see the clear connection between the two. When you go to even younger people in schools and colleges, I'm really impressed with the way the message has got through and the commitment that people have to making a real difference.

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It is absolutely necessary that we understand the human dynamics associated with hearing loss and we believe hearing loss is a communication disorder that affects the patient and all of their communication partners.

Adam Shulberg

SENIOR AUDIOLOGIST, CUBEX.

Adam Shulberg is a Fellow of the Royal Society of Medicine, British Society of Hearing Aid Audiologists and a member of the American Academy of Audiology.

The Cubex Approach: 'Really practical magic', in the words of one long-standing patient of our practice. Our uniquely person-centred care positively influences the lives of people with hearing loss and their loved ones. Our desire to enhance patient empowerment includes our mindfulness-based cognitive and audiological wellbeing CALM programme.

Created by Cubex, CALM supports people experiencing impaired hearing ability, tinnitus and unhealthy levels of stress.



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# THE BIG INTERVIEW

**Leading by example** Dr Annalisa Jenkins is a thought leader in the world of life sciences, with decades of experience as a leader within the pharmaceutical industry and academic institutions. She talks to Prognosis about the lessons she has learnt from her long career, and her prescription for effective leadership

Words: Viel Richardson Portraits: Lisa Bretherick





A long time ago in a land far, far away, scientists were heroes, projected in the culture as slightly uncool but trusted boffins whose brilliance defeated deadly disease, environmental catastrophe and even alien invasion. Their dedication and knowledge were humanity's last line of defence against the terrors of the unknown.

Things have changed. During the SARS-CoV-2 pandemic, large swathes of people in the Western world refused vaccines developed in some of the most sophisticated laboratories on earth, instead placing their trust in herbal remedies, folk medicine and homemade concoctions. Then there was Donald Trump. Playing to the anti-science crowd by publicly disparaging his chief medical advisor Dr Anthony Fauci, the President encouraged health officials to study the veracity of injecting bleach into people as a means of fighting the virus. What happened?

Practices by some large pharmaceutical companies have unfortunately played a significant role in the change. The offering of inducements - the public saw them as bribes - to clinicians to use their products, manipulation of drug trial data and sale of unsafe drugs to poorer countries have led to a widespread loss of trust in the motivation of the pharmaceutical companies and the scientists who work for them. Bad Pharma by Ben Goldacre, a book detailing bad and criminal practices in the pharmaceutical industry made headlines when released in 2013 and still sells well today. There remains a wariness about these companies, a

suspicion that profit matters above all else. There is a sense of the absence of morally trustworthy leadership or possibly the lack of any true leadership at all.

"When I joined, the pharmaceutical industry was rated lower than the tobacco industry in the public's eyes," says Dr Annalisa Jenkins, with a wry smile. "But I've never had a problem working here. Every day, the industry was developing amazing therapies, technologies and advanced medicines which extended and enhanced people's lives. I've worked with thousands of people who go to work every day, inspired by that purpose. It has been a wonderful industry to work in." She acknowledges, though, that it is far from perfect.

Dr Jenkins has spent most of her career in the pharmaceutical and biomedical worlds. In 1987-88 she treated some of the first sailors returning from deployments with HIV. In the mid-90s she was a research fellow at Imperial College working on the molecular effects of insulin and cholesterol on the cardiovascular endothelium. At Merck Serono, she became the first female head of global research and development for a top-20 pharmaceutical company. She has been a thought leader in the industry for decades and at present undertakes trustee and board duties for institutions such as Genomics England, The King's Fund and the London School of Hygiene and Tropical Medicine. She also sits on the committee of the Science Board to the US Food & Drug Administration (FDA). which advises the FDA leadership

on complex scientific and technical issues. She lectures around the world on issues relating to the biomedical sciences, including leadership. But her medical journey started in the unlikely environs of the British war machine.

"When I was 19, I decided I wanted to go into medicine," Dr Jenkins told me as the sun streamed through the windows of her home office. "Having a family naval connection, I decided I wanted to be a medical officer in the Royal Navy. I went to their Holborn office to apply." It was not an auspicious start: the year's intake had already been filled. Nonetheless, she was sent for a trial at Royal Naval Air Station Culdrose. "I loved it," she says, and they liked her too: six weeks later she was signed up as "recruit number 21 of 20". That decision

I believe everybody has the capacity and the capabilities to be a leader. But good, effective leadership is hard; it is something you have to work at.

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Stuck: How Vaccine Rumors Start and Why They Don't Go Away Heidi Larson (OUP USA, 2020)

Viral: The Search for the Origin of Covid-19 Alina Chan, Matt Ridley (Fourth Estate, 2022)

Drive: The Surprising Truth About What Motivates Us Daniel HPink (Canongate Books, 2021) changed her life – she credits the navy with teaching her many of the fundamentals of leadership that have sustained her thought her career. *"When my ship was deployed to the first Gulf War, I was the first female medic* 

ever to serve in frontline conflict for the Royal Navy. You learn a lot about yourself and other people in those situations. You also get a close-up view of how good leadership works." Dr Jenkins explains.

Having risen to the rank of lieutenant commander. Dr Jenkins left the military and joined the NHS as a cardiovascular registrar. While she was working at the National Heart and Lung at the Royal Brompton, one of her mentors, Professor Andrew Coates, suggested that her skillset and personal drive might find a more suitable match in the pharmaceutical industry. "Iapplied for a medical advisor role at Bristol Myers Squibb," she says. "Iknew a couple of people there. The medical director at that time, Gillies O'Bryan-Tear, told me: 'You can do this, Annalisa, but it is going to be very different."

He was right about her abilities, because a few years into her time at Bristol Myers Squibb, Dr Jenkins was leading the international medical division, which meant managing the medical directors of 55 countries. *"I quickly came to the realisation that I had to really work through how to translate my leadership goals and ideas into a wide variety of cultures. What worked in Brazil might not translate in South Africa or China,"* she recalls. Later in her career as head of R&D at Merck Serono, she would be responsible for teams in 120 countries. "Ihad been lucky enough to work for and with some remarkable leaders and these roles meant I spent a lot of time reflecting on the nature of good leadership. What actually is it in the business environment and how do you deliver it? Ultimately, what great leaders do is create sustainable progress and take people along with them on that journey. Having read endless books on the subject, I never felt that any of them had quite hit the mark."

So she looked to her own experiences and observations, good and bad, and produced a framework for leadership, initially to help improve her own leadership skills, which she has used ever since and now shares with others. "Ibelieve everybody has the capacity and the capabilities to be a leader. But good, effective leadership is hard; it is something you have to work at," she explains. She calls her approach the 'Einstein model' of leadership, because she was living in Princetown not far from the great physicist's home when she codified it, loosely based on the most famous equation in science: E=MC<sup>2</sup>.

The Es are envision, energise, engage, enable and execute. Envision is clear: a good leader envisions the place where they want to take the organisation. You need a destination in order to chart a course. If you have no idea of where you want to go, it will be hard to inspire people to follow you. *"When it comes to energising, this is not just about rousing speeches and motivational posters,"* Dr Jenkins explains. "Leaders need to focus the energy they generate and channel it towards their vision. They also need to know how to maintain it. Positive energy is a precious resource and you need to work at removing anything that drains it from the environment."

One of the most common business buzzwords today is engagement. Everyone talks about having an engaged workforce and how it is vital to creating successful teams, divisions and businesses. "Fifteen years ago this was not the case, but I always felt that how you thought about engagement and how you measured it was important. Achieving it is not an inevitability. It is a matter of reaching out to people, working through what makes your staff tick, what makes them want to come to work. Without this information it is difficult to know what you need to provide to help them succeed."

Dr Jenkins continues: "Enablement follows on from this, as it is giving your staff the environment and tools to get on with the job. Leaders can't effectively lead from a distance. They have to get down into the organisation, work out how to enable their people to be able to be successful, to thrive, survive and flourish. The final E is very important, and people often forget this, but leaders have to execute, get stuff done. It helps set the culture. I've worked with leaders who were very good regarding the energy and the vision, but when you asked what they personally had achieved in the last year, they struggled to tell you. If you don't know, neither will the people you are expecting to follow you."

 $\triangleright$ 

This is where measurement (the lone 'M' in the equation) is important. For any organisation to progress, it has to have a sense of how it is doing. "If you don't keep score, you're just practising. But it is easy to go too far," Dr Jenkins says, having worked in divisions where analysing performance data could have been mistaken for being the whole point of the business.

"I have been faced with so many key performance indicators (KPIs) that Ilost the will to live," she says laughing. "I generally say good leaders have around five key goals and 10 priorities, each one of which is measurable. I have seen people with hundreds of KPIs and whole teams trying to work out how to measure them. It is very difficult if not impossible to maintain a clear vision when faced with such a blizzard of data."

On the C-side of the equation, possibly the most important of a leader's skills is communication, without which it is extremely difficult to do the other things that make an effective leader. "I had to work hard on this as I'm quite an introvert. I'm quite an academic, bookie sort of researcher at heart," Dr Jenkins confesses. "It took time and work to find my communication style, to make sure that I had a strong presence. Only then could I actually engage with and energise teams in a way that was natural to me and sustainable overtime."

She sees collaboration is another key skill and believes that great leaders reach out beyond their business, even beyond their sector, for expertise and information. "In this era of rapid, diverse technological innovation, no-one can have all the answers and capabilities a company needs."

The business world can be a very tough environment and Dr Jenkins's last C – compassion – may seem at odds with that, but she believes it to be crucial. "This word crosses my mind every day, linked very closely with altruism and graciousness," she says. "You have to be interested in and concerned about people. Some might think that's a bit soft. But I can promise you that an unhappy organisation is not going to get stuff done. Everything, all the things we're talking about, is ultimately about getting stuff done."

Dr Jenkins loves the world of the life sciences and remains inspired by the huge potential for good it has, which is why she is so passionate about passing her experience on to the next You have to be interested in and concerned about people. Some might think that's a bit soft. But I can promise you that an unhappy organisation is not going to get stuff done.



generation of industry leaders. "It's really important to give back, just as I was so fortunate over my entire career, to benefit from mentors who took the time to coach me and support me. Ifeel it's very much part of my leadership journey, to mentor and support young entrepreneurs on their leadership journeys. I think it's an obligation of leaders to tell their stories and to offer insights, because their experience matters."

While there are endless courses available with the word 'leadership' in them, Dr Jenkins believes these can only take you so far, because they take place in an intellectual context. The most powerful learning happens when young leaders can apply the knowledge of an experienced mentor in dealing with the challenges they face in their own businesses. *"I've made many mistakes and errors along the way. And I'm always happy to share those,"* she says.

Another thing she cares deeply about is role modelling. "It's so important that when younger leaders look upwards, they see two things. The first is behaviour that inspires them to be the best leaders they can be. Secondly, and very importantly, they look up and see people who look and feel like them. As a female leader, I have always felt it very important that I take being a role model seriously, which is why I prize authenticity. I have never downplayed my femininity and tried to be more male. That's why my heels are one of mytrademarks. It is about finding a powerful and effective voice while being true to yourself. That holds true for race, religion and sexuality as well as gender. That's the only way you can sustain good leadership in the long term."

Dr Jenkins points out that today, many institutions are set up to be led and governed by a predominantly white male management. "I just don't *think those are the type of companies* and institutions we are going to need," she tells me. "But you'll never hear me bashing men. What I will say is, it's the job of women to help men think through their leadership styles. Many men have never worked with very senior, competent, high-achieving women and can struggle to separate their view of women in their personal life and women in the workplace. If women are to succeed in the corporate realm, they need to help men think about how to be effective in an organisation with a strong representation of women. Who else is there to teach them?"

The next thing Dr Jenkins states that great leaders need comes as a bit of a surprise, given the nature of the role. "Great leaders make decisions." An issue that goes right to the heart of the individuals themselves is chronic hesitancy. If left unresolved, it can lead to serious, sometimes catastrophic, problems for organisations. "It's caused by fear of failure. You will make mistakes, you will get things wrong, and some projects will not work. You have to get comfortable with that. I've had lots of failures, but you learn from them and move on," she explains. "Great leaders retain that willingness to take risks. They stay comfortable with risk and ambiguity. Not having that paralyses people. One of the key lessons I learned in the Navy was the importance of

being able to operate effectively under pressure. I've seen fear of failure prevent executives from making decisions, and the consequences can be dire."

So what about the future? With the emergence of genomics, artificial intelligence, neural networks, synthetic biology and nanotech, the life sciences present an incredibly diverse and exciting landscape. Scientific breakthroughs are being announced on a regular basis. Novel ways of treating physical and mental illness are being developed in institutions across the world. It a complex, fast-moving landscape and it is going to take real leadership if we are to make the most of the possibilities. And, more importantly, if we are going to take the public with us.

"What I worry about with today's young, is the example many our leaders are setting them. There are serious questions about the quality of leadership in our organisations, our multinational institutions," Dr Jenkins says with some concern. "But what gives me hope is the young people I see and work with. We have a wonderful supply of young biotech scientists and entrepreneurs. I spend a lot of time with a diverse population of leaders and young CEOs and graduates, and I'm inspired every day by what I see."

Dr Jenkins has a deep optimism that the emerging generations have the talent, desire and drive to make the world a better place. They have the ability to make scientists heroes again. It is up to the rest of the industry to provide the environment and teach the leadership skills that will allow them to do so.



# AGEING GRACEFULLY Professor Bruce Guthrie on why we

need a new way of thinking about healthcare to tackle the problems faced by an ageing population

Words: Viel Richardson

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As a professor of general practice, Bruce Guthrie splits his time between seeing patients in a busy GPs' practice and researching how healthcare can be best made to serve the population at large. Academic GPs usually work in translational applied research, meaning they're often referred to as 'health services researchers' and 'social scientists'. Prof Guthrie's main interests are multimorbidity (people living with multiple long-term conditions), polypharmacy prescribing (the safe prescription of multiple medications), and how best to create a healthcare system that meets the often-complex needs of older people. As well as undertaking policy and organisational work with NHS Scotland, he is also director of the Advanced Care Research Centre, a facility studying healthcare in later life. Prof Guthrie, it is safe to say, is a busy man.

"In the last 50 years, we have seen a drift away from generalism towards specialism in the NHS. Historically, hospital doctors were often generalists; they would be a general physician or a general surgeon, who might have an interest in a particular part of the body," says Prof Guthrie. One of the consequences of this drift to specialism is, he explains, a gap that has emerged between primary and secondary healthcare. Primary care is a generalist field delivered by GPs and the multidisciplinary teams they work alongside, while secondary healthcare is the realm of specialist consultants with single-disease perspectives and is generally delivered by hospitals and specialist clinics. There are some generalists in hospitals, notably geriatricians, but most hospital doctors are now specialists focused on particular conditions.

"Over time those general clinicians who once had a special interest have become more specialised and done less general medicine," says Prof Guthrie. "This matters because the generalist clinicians spend years developing the skills to assess the impact of any intervention on the patient as a whole – pastoral as well as clinical. In the case of multimorbidity, this can mean balancing the complexities of patients needing several different medications. We've seen a loss of these generalist skills within the hospital system."

This generalist tendency in hospitals acted as a bridge between the laboratory and the patient. Staff were in a position to see the impact of any new drugs. As they were more generalist in their approach, they often spoke the same language as the GPs who would be seeing the patient after they were discharged. This meant a continuity in the style of care after the patient was discharged and enabled an exchange of information about the long-term impact of their treatment. Things are very different today.

"My interest really starts once new drugs reach phase three trials or are licensed for use. How do you ensure they are used appropriately in practice? It is a very long way from a promising basic science finding to an effective medication, and along this pathway drugs are tested and assessed against very narrow parameters. This is where I see a gap in the system that has consequences for safe prescribing, especially for the elderly," Prof Guthrie tells me. "Drug trials are done with participants who are usually selected to be 'clean'. This means they're younger, have few other conditions, are taking fewer other potentially conflicting drugs. The trials are effectively stripping out much of the complexity that exists out in the real world."

For the professor, this is a problem. He says that, for example, you could create a drug which is very effective but that could cause dizziness in some people. If you give it to



Drug trials are done with participants who are selected to be 'clean'. This means they're younger, have few other conditions, are taking fewer other potentially conflicting drugs. The trials strip out much of the complexity that exists in the real world.

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someone in their fifties, they might get dizzy and stumble, but are unlikely to seriously hurt themselves. If you give it someone aged 90 who's already at high risk of falling and has osteoporosis, not only are they more likely to get dizzy, but also more likely to fall and break their hip. The balance between benefit and harm in the real-world population is different to that of a clinical trial.

"We have an ageing population which leads to more people with multimorbidity, polypharmacy and frailty. Clinical trial populations are becoming increasingly less well aligned with the people we actually give most of the drugs to," Prof Guthrie points out. "Of course, living longer is a good thing. Polypharmacy in many ways is a good thing. There is good evidence that prescribing multiple medications to treat a condition can be more effective that prescribing one. But when you combine several single-disease perspectives in an 85-yearold with eight conditions, you can end up prescribing 20 drugs. This situation has never been evaluated in trials. Of course, we do need a pipeline that delivers new drugs, but our current pipeline is designed for the world of 30 years ago, when there were fewer old people, and less multimorbidity and frailty. For me, clinical trial design and the way we license drugs is problematic. We don't evaluate the effects of any new drug in a large number of people over the long term."

A lot of the issues are driven by medications prescribed for life. People will often take a drug for 30 or 40 years. This involves a strong assumption that the benefit they bestow is persistent. But Prof Guthrie believes there will often be a point where the benefits are outweighed by harm, because the side effects from drugs increase as you get older, develop other conditions, and are prescribed more medications.

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"So, while we have a pipeline delivering new drugs, what we lack is a healthcare system, or indeed a research system, which tells us enough about the people we prescribed them to, 20 years later. How are they doing? Can we safely take them off drugs they have been on for decades?"

In 2016, the National Institute for Health and Care Excellence (NICE) published a national clinical guideline for multimorbidity. Prof Guthrie chaired the guideline development group and one of the areas they were interested in was what long-term drugs you could stop prescribing and when. "We were faced with a complete dearth of evidence," he says. "Say you were first prescribed statins when you were 60, you haven't had a heart attack, developed angina or had a stroke. You are now 90 years old. Do you need to take them until the last day of your life? If the statins have made your atherosclerosis regress, there must come a point where stopping them would mean that you can't live long enough for dangerous levels of atherosclerosis to redevelop. At this point, is living with any side effects or the hassles of taking daily medicines worth the benefit you are getting? We just don't know. We don't have any clinical evidence to base our decisions on, because the studies aren't being done. There is a big-data approach to pharmacoepidemiology-the study of the uses and effects of drugs in well-defined populations – which could help us better understand some of that complexity. But there is not nearly enough of that kind of large-scale work being done for the general population. We simply don't have an effective enough system for evaluating existing drugs based on the way that we use them."

Most clinical trials screen out people who are at high risk of side effects to the drug being tested. They remove applicants with conditions that interact with the drug, or who are on medications that interact with the drug. Much of this is done for sound scientific reasons, but there are consequences, especially for the older population. "For example, many trials screen out people with chronic kidney disease, because many drugs are excreted renally. A large proportion of older people have chronic kidney disease, yet we then prescribe the drugs to them. Then when harm emerges, we change dosing recommendations or prescription advice."

Prof Guthrie believes that what is needed is research on evaluating the outcomes of a pipeline that delivers new drugs based only on their effectiveness against specific diseases. He also believes that an increase of generalists' clinical skills will be a key part of creating a more effective healthcare system. "At the Advanced Care Research Centre, one of the things we are undertaking is capacity building. Our doctoral training programme is deliberately highly interdisciplinary because we need people from different research disciplines who can work together right from the start of their careers. Many researchers and clinicians are trained in their specific discipline, then go out into the real world and have to learn how to work with other people. There's much less of that interdisciplinary working in the system than you might think."

As well as quantitative research using big data, the centre undertakes qualitative research to understand people's experiences of healthcare in later life, including their experience of life transitions. Older people can live independently in their own homes, in sheltered housing, have extra-care housing or need residential care. If they had to leave their home, how was that transition handled? Did it allow them some dignity, give them a chance to say goodbye to their home and its memories? If transitions are forced



If you want to help people plan, you need to be able to predict the future better. Knowing who's at high risk of certain events is important, and most prediction tools work very badly in the older population.

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through ill health, could that transition have been better planned or avoided altogether?

"You hang on by your fingernails in your own home and then it all falls apart and you're admitted to hospital and end up in a care home in an unplanned way. Understanding this requires research from multiple perspectives, mixing quantitative and qualitative methods," the professor explains. "If you want to help people plan, you need to be able to predict the future better. Knowing who's at high risk of certain events is important, but most prediction tools work very badly in the older population. At the Advanced *Care Research Centre, we're very interested in also doing* enhancement of the data by making better use of free text. This is information that is not part of your clinical diagnosis but noted alongside as additional information. It is this that often gives real insight into the patient's daily experience. We are working with natural language processing methods for extracting meaning from free text to help us better understand older people's needs."

The ultimate aim of Prof Guthrie's work is to design new models of care for an ageing population. The question he is asking is: *"How could we as a society organise care for older people and those in later life, who often have the most complex needs, in a way that improves their lives, and doesn't merely keep them alive?"* If the right answers can be found, the whole of society will benefit.

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The Drug Development Unit at the Sarah Cannon Research Institute runs clinical research projects that test the safety and efficacy of new pharmaceutical treatments. The unit's head, Dr Anita Sexton, explains how drug trials work and why they're of such importance to both the medical sector and the patients who participate

Words: James Rampton



Dr Anita Sexton, head of the Drug Development Unit at the Sarah Cannon Research Institute (SCRI) London, a world-class clinical trials facility whose speciality is the development of new therapies and precision medication for cancer patients, is talking about the most fulfilling part of her job.

"You know," she reveals, "we get a lot of letters from patients and their families, saying things like, 'If it wasn't for the clinical trial at Sarah Cannon, my wife wouldn't have made our daughter's wedding.' When you read those letters and you see somebody having that really positive response to the trials, it's so rewarding."

Dr Sexton, a reassuring presence who has been in post at the leading Harley Street institute for just over three years, expands on why her position is so satisfying. "Sometimes it's about quality of life, but it's also about being able to give cancer patients maybe another 12 months, maybe another two years. We've got patients who have been with us for seven years. So yes, when you see those benefits and how you can have an impact on someone's life, it makes it very worthwhile."

Dr Sexton goes on to outline the exact role of the Institute, whose motto is: "We believe that participation in a clinical trial is the first step in fighting cancer, not the last."

She says: "We are a referral centre. We've built up a network with numerous oncologists around the country. The patients will go and see them, and the specialists may then recommend them for trial. These patients will go through a number of pre-screening processes with us. And hopefully, all being well, they pass those steps, and we can move them on to participate in a trial itself."

The clinical trials are run by the Institute's Drug Development Unit. "That is essentially a place that conducts research on humans. So what we're doing here is we're taking a drug developed in the laboratory of a pharmaceutical company, and testing it on people."

The process is, quite rightly, extremely rigorous. "The pharmaceutical companies own the compound," Dr Sexton explains. "They come up with what's known as the 'clinical development plan' for that compound. Then they'll come to us and say: 'We've got this new drug, and we're ready to start conducting formal clinical trials on it.' They will have already received approval from the Medicines and Healthcare Products Regulatory Agency (MHRA), which is the regulatory authority that governs clinical trials in the UK. We will then start to work with them to make sure that we can meet the requirements of the protocol and that we can find patients for that trial."

Most of what the Institute does is Phase I trials. By way of explanation, Dr Sexton says: "That's all about working out if the drug is safe for humans. Once you've done Phase I and you've worked out that the drug's safe, then you move on to Phases II and III, which entail either more patients or varying degrees of the disease."

Dr Sexton, whose institute has 50 staff and treats 90 patients at any one time, delves deeper into the detail of a clinical trial. *"When we treat the patient*  with the trial drug, we give the data back to the pharmaceutical company. At the beginning of the process, the patients say that they're happy to participate and that they're happy for the data to be shared. When that information goes back to the pharmaceutical company, it's completely anonymised. We might not be the only centre that is working for that pharmaceutical company. There could be two or three in the UK and several more in Europe and the US. They take all that data together, analyse it, and determine whether the drug is having a significant impact or not."

Then, she adds, "all that data gets compiled into a huge dossier, which gets sent to the regulatory authorities – the MHRA in the UK and the Food and Drug Administration (FDA) in the US. Based on that information, they will make a determination on whether the drug can be licensed or not. To get the drug to market can take 10-plus years, so our involvement is at the very early stages of the process."

One aspect that stands out about the Sarah Cannon Institute is its success in what are known as 'first-inhuman' trials. Dr Sexton elucidates: "We have examples where we have treated the first patient in the world with a particular drug. The Drug Development Unit is all about looking at the medicines of the future. What we do here, we hope will be the standard of care in the next five to 10 years."

For instance, last November the Sarah Cannon Institute began a Phase I trial of OVM-200, the lead cancer vaccine manufactured by Oxford Vacmedix. It was the first clinical trial in the world of a cancer



The Drug Development Unit is all about looking at the medicines of the future. What we do here, we hope will be the standard of care in the next five to 10 years.



vaccine using the novel technology.

Clinical trials are, of course, nothing new. They have a long and honourable history. According to Dr Sexton, "you only have to look back through history to see how clinical trials have developed."

Intriguingly, proper governance around clinical trials really stemmed from the Nuremberg Trials. "At that time, it emerged that in the concentration camps Nazi doctors had been experimenting on humans. Following that, the judges made a recommendation about trials involving human beings. First and foremost, they said, you had to have informed consent. If you look at the regulations that we have today, we operate under the International Council on Harmonisation (ICH) Good Clinical Practice (GCP) guidelines. All that can be traced back to that first set of regulations that came out of the Nuremberg trials."

There are, though, examples of clinical trials being conducted long before that. "If you go back to the 1700s, a Dr Lind is credited with performing the first clinical trial. He was looking at scurvy in sailors. He gave some vinegar, others citrus and looked at their responses. Those who took the citrus responded better."

That's not to say that every clinical trial works. In 2006, for instance, there was a notorious failure during a trial at Northwick Park Hospital, London. Six previously healthy young men fell seriously ill with organ failure and disfigurement after experiencing a grave reaction within hours of taking the drug TGN1412 in a clinical trial. It became known as the Elephant Man trial.

This is one reason why the rules governing clinical trials are so strict. "The regulations continue to get more stringent," says Dr Sexton. "Patient welfare is our number one priority. Everybody always remembers the situation at Northwick Park. We learned a lot from that experience. After that, recommendations were made, and some of the changes to the way we conduct trials now are because of the situation that arose there. No one ever wants to be in that position again. We need to keep learning and moving on."

It is extremely beneficial to medical science that patients are willing to undertake clinical trials. What drives people to take part, then? *"We've got over 1,000 patients onto clinical trials* 



over the years, and that in itself is huge," observes Dr Sexton. "Because that's 1,000 people's lives that we've had some positive impact on. But they've contributed something as well. We have two types of patients that we see at Sarah Cannon. You've got those that see a clinical trial as their last hope. Perhaps conventional treatments and current standard care have failed them, so they're looking for some sort of novel medicine that might assist them."

Then there is a second group of patients who actively seek out clinical trials because they want to give something back. "Maybe they know that they haven't got long, but during that time they feel that they want to help science progress. We've even got a couple of doctors and nurses that we treat here. So again, it's their way of contributing."

Another enormous advantage that the Sarah Cannon Institute enjoys is its prestigious address on Harley Street. Dr Sexton reflects: *"Harley Street has* got a reputation linked to its name. Coming up, our patients get a feeling of importance. They have a sense that they're being well looked after and that they're coming to the best place. Where else would you go?"

Drug development units clearly already have a very significant role in modern medicine. So how does Dr Sexton see them evolving over the next 10 years? "If you look at what we're doing now with cancer treatment, it's very much personalised. It's tailored to the individual's genetics. Genetics are coming much more into play. Knowing someone's genetic makeup can really influence how we treat a patient. Think about the Angelina Jolie case. That highlighted that if you have the BRCA gene, you're much more predisposed to breast cancer. If we know that person's genetic makeup, we can be very specific with their treatment."

That means people can have a better quality of life. "If you think back to 20 years ago, when somebody had chemo or radiotherapy, they'd be floored for weeks and lose their hair. You were basically poisoning their entire body. But now drugs are much more targeted, and people have a much better quality of life. I remember talking to one lady who used to visit us. She was talking about her previous Christmas, where she was on standard, traditional chemo and, she said, 'Christmas didn't exist.' But since she had been with Sarah *Cannon, she was having more targeted* treatment. She was back at work, and her quality of life had significantly improved. This year she was cooking Christmas dinner!"

As you can see, Dr Sexton's job is very inspiring. At the London branch of the Sarah Cannon Institute (the six other sites are in the US), she could perhaps be helping to make a breakthrough that could save millions of lives. "I've worked in clinical research my whole career. I did a PhD at UCL and then went into clinical research. I can't imagine working in any other industry. Our clinical teams do an amazing job. I do find it very rewarding.

"Usually I say to people: 'I just come in to work every day and do my job.' But when I sit down and think about what we actually do here, then yes, I'm immensely proud to head up this unit. This is a very special place indeed."

Harley Street has got a reputation linked to its name. Coming up, our patients get a feeling of importance. They have a sense that they're coming to the best place. Where else would you go?



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# Q+A

**Cerebrospinal fluid leak** Dr Mohamad Bydon, neurosurgeon at Mayo Clinic Healthcare and professor of neurosurgery, orthopaedic surgery and health services research, on cerebrospinal fluid leak, a sometimes tricky-to-treat condition

Interview: Viel Richardson



Cerebrospinal fluid interacts with the cells and neurons that make up our brain and spinal cord in a highly regulated way.



#### What is cerebrospinal fluid?

Cerebrospinal fluid is a fluid that the body produces to bathe the spinal cord and the brain. The fluid circulates around the lateral ventricles of the brain, which are at the sides of the brain; the third ventricle, which is right in the middle; the fourth ventricle, which is in the hindbrain; and then down to the spinal cord. A continuous flow of cerebrospinal fluid is very important to cerebrospinal health.

#### What is its function?

Its main task is to deliver some of the nutrients - the proteins and glucose - that the brain and spinal column require in order to function, and remove toxins that might harm them. A brain tumour, for example, is going to produce toxic chemicals and release them into the spinal fluid. These will be disseminated as the spinal fluid flows through the system. The job of the spinal fluid is to preserve a balance for the brain and spinal cord by removing these toxins, as well as the usual waste products, from the system. The aim is to keep itself in balance so it can distribute the right nutrient mix. When it is unable to do that, people tend to have a lot more symptoms.

Another thing the spinal fluid does is physically protect the brain and spinal cord. Our skulls and vertebrae do a great job of protecting the brain and spinal cord, but you need some cushioning to protect them, and the fluid provides that.

#### How is the fluid contained?

There is a sac that holds that fluid, called the dura mater. This lines both the spine and the brain. On your skull, you have the skin, then below that the fat. Below the fat, you have a periosteal layer, the periosteum (a membranous tissue that covers the surfaces of your bones), and then the bone. Below the bone, you've got the dura mater, which lines the entire brain and the spinal cord. It's quite a substantive organ.

# How does it go about removing waste and toxins?

Cerebrospinal fluid interacts with the cells and neurons that make up our brain and spinal cord in a highly regulated way. Typically, we have 150ml of spinal fluid in our body at any point in time, but we need to produce 15 to 30ml per hour, which replaces the fluid that left the system when removing waste products. In a brain that is functioning normally, spinal fluid flows through the subarachnoid space before being absorbed into the superior sagittal sinus, which is a large vein containing structures called arachnoid granulations. These are small protrusions going into the outer membrane of the dura mater, through which the cerebrospinal fluid exits the subarachnoid space and enters the blood stream.

#### What is the cause of the leaks?

There are two types of spinal fluid leaks. One type is iatrogenic, meaning it has been caused by surgeons in the course of a procedure. We create a hole as we go into the brain or the spinal cord to get access a tumour or some other pathology. At the end of the procedure, we close that hole with stitches. But if those stitches don't hold against the pressure of the spinal fluid, then you will have a leak. Iatrogenic leaks can also be caused during a spinal tap or lumbar puncture. Sometimes people get epidurals to deliver anaesthesia. Ideally in an epidural the hole is outside the dura, but you're working right next to the dura so sometimes, by mistake, the

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obstetrician or the anaesthesiologist placing that needle can get a little nick in the dura causing a spinal fluid leak.

# Are leaks always the result of surgery of trauma?

Not always, there is also what's known as a spontaneous spinal fluid leak. In these, patients who are healthy, active and athletic can for some reason develop a thinness of the dura due to the constant friction caused by some activity, then the dura fails and you get a leak. Sometimes you have young, healthy people with a thin dura that just pops open and leaks. Also, you can have a bony spicule that's pushing on the dura which can cause a hole, or, if a tumour grows in a particular way, it can erode the dura. These types of leaks tend to be rare. However, when they do occur, they can be very challenging to find in the absence of any obvious trauma.

# What are the symptoms of a leak?

If the spinal fluid leaking is out of the brain, vou can get headaches, nausea and vomiting. If there's spinal fluid leaking out of the spine, you would get headaches at first, which can, but won't always, progress to nausea and vomiting. Fluid leaking out of the brain is a little bit easier to control because the pressure is not as high. When the fluid is leaking out of the spine the pressure is significantly higher because you essentially have a tall column of liquid being pulled down by gravity. So, while there are similarities, there are also minor differences when the fluid comes out of the spine, with headaches being the main symptom.

The hardest aspect of treatment is that you can't always find the location of the spinal fluid leak, as the tear can be very small and still cause the patient symptoms.



This is a pretty mature and successful field in which we are not seeing major breakthroughs at the moment, although of course this may change in the future.

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# What are the long-term impacts if a leak is not treated?

You have to separate the two kinds of leak: internal and external. If a surgeon had to make an incision to take out a brain or spinal tumour, there could have been clear fluid leaking out of the wound. If the fluid is leaking out of the skin, this can cause meningitis or ventriculitis, which can be devastating illnesses. In rare cases, they can even be fatal. So you really want to stop any external leakage, as where there is leakage there is communication with the outside world, and that can set you up for infections. If the leak is internal, the body's production of the fluid won't match the amount lost to the leak. Those scenarios can be extremely unpleasant, with the person suffering near continuous symptoms.

#### How do you treat these leaks?

The treatment is going to vary depending on the initial cause. If it's surgical, your surgeon may go back in and look for the leakage in the dura and put a stitch in to repair the leak. It is also possible to get a blockage of the arachnoid granulations. Any blockage of these will cause an excess of fluid to collect in the subarachnoid space, causing increased pressure on parts of the brain. In that scenario, the surgeon would perform what's known as a shunt. The most common is a ventriculoperitoneal shunt. This is where we place a shunt catheter in the brain with a valve. We then run a tube down the neck past the chest through the belly then into the peritoneum, where the other end of the catheter is

placed. The excess cerebrospinal fluid exits through this and is absorbed into the bloodstream. Sometimes, when you have a postoperative spinal fluid leak that you can't completely stop because the pressure is too high, you may have to temporarily insert a shunt or a drain catheter to release fluid and reduce the pressure until the would heals.

# Is the ventriculoperitoneal shunt temporary?

No, the shunt can be permanent; there are people who live with ventriculoperitoneal shunts for life. The goal physiologically is to recreate the balanced system that maintains a stable 150ml in the system. Sometimes having a stent permanently in place is the only way to achieve this.

# What are the most challenging aspects of treating this?

The hardest aspect of treatment is that you can't always find the location of the spinal fluid leak, as the tear can be very small and still cause the patient symptoms. If it's post-surgical, there can be delayed leaks after surgery, and it can be unclear where the leak actually is – it is not always at the site of the procedure. There are several tests we can do pre-operatively to find it, but it's not always that straightforward, which can become a challenge when you're working to identify that leak and put a stop to it.

#### Could a leak in the brain region impair a patient's cognitive function?

The leak itself wouldn't cause

cognitive decline per se. Having said that, there is a condition, especially in the elderly, known as 'normal pressure hydrocephalus' which is an excess of spinal fluid. This can cause cognitive decline, urinary incontinence and trouble with walking, among other things. So, if, for example, the arachnoid granulations get blocked, the patient could suffer cognitive impairment alongside other symptoms.

#### If you had a silver bullet, what aspect of treatment would you seek to improve?

I would like to see better, more longterm methodologies developed for when we have to redirect the fluid to relieve pressure. The technologies we have today don't last forever. They might fail after a year or five years or 10 years, which means having the patient back for further surgery, with the risks any surgery involves. This is a pretty mature and successful field in which we are not seeing major breakthroughs at the moment. although of course this may change in the future. For the moment, the core improvements I would like to see are more engineering solutions, figuring out how to do what we do, but better. Of course, in the long term, finding a way to re-make the closed system without the need for things like stents would be the ideal solution.

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# **Patient experience** Sean Cannon on how Deep Brain Stimulation finally freed him from years of constant neuropathic pain

I had been struggling with a condition called neuropathic pain for several years. The condition means that my nervous system is constantly generating pain signals, so even when there is no physical cause, I can suffer severe pain over large parts of my body. It is difficult to pinpoint the exact cause, but my partner Carole thinks it started when my car was hit from behind about eight years ago. There was damage to my spine which necessitated three discs being replaced and part of the spine being supported with titanium rods. It was pioneering surgery at the time, and it seemed to go really well. Quite naturally, I thought that was it.

Some time later, I started experiencing pins and needles in the fingertips of my left hand, which gradually moved up my arm and then moved across to the right arm. Then my legs started to be affected. I couldn't feel the ground properly beneath my feet, it felt like walking on a trampoline and I started to stagger. My GP referred me to a neurologist who sent me for a brain investigation. After two MRI scans, they discovered a narrowing of part of the spinal cord and I was referred to a leading neurosurgeon, Mr Donncha O'Brien. He immediately realised the seriousness of the situation and told me that without prompt intervention I could end up completely paralysed and needing mechanical assistance to breathe.

Mr O'Brien needed to perform two procedures to relieve all the pressure around the damaged area, but even so there were no guarantees of success. I could still end up paralysed after the surgery, but without the procedures, paralysis was almost a certainty. I felt I might as well go ahead.

Afterwards, I pretty much had to learn to walk again. Progress was initially good, then suddenly I started getting drop attacks, where I would suddenly fall for no reason. I would be conscious, know I was falling, but be unable to do anything to protect myself. I couldn't even put my hands out to break the fall. Once, I fell onto my face, breaking my nose and suffering from concussion for about two months.

I knew that part of the sleeve of my spinal cord was damaged and things were getting worse, so I started doing research into possible solutions. I found Dr Declan O'Keefe, who specialises in spinal cord stimulators, and he agreed to take me on as a patient. After prescribing ketamine infusions for the pain, he performed the nerve stimulation procedure. This entailed inserting a probe to stimulate nerve activity in specific areas around the damage.

The operation solved my physical issues, but I still suffered severe pain and had to continue with the ketamine alongside other pain medication. The problem was, it would have taken a second stimulator in the neck region to cure my pain as well, and there was simply not enough room. It was Dr O'Keefe who approached Prof Tipu Zahed Aziz about performing the deep brain stimulation (DBS) procedure to cure the pain. I came over to The London Clinic from Dublin for the operation. I was a bit nervous, but Prof Aziz told me I was in very good shape for someone with this condition, which improved the chances of a good outcome. This was very was heartening to hear.

After the operation, Prof Aziz told me that things had gone very well, so I was confident and excited about turning on the electrodes. There wasn't a 'wow' moment when we finally switched them on. **DEEP BRAIN STIMULATION? Professor Tipu Zahed Aziz,** founder and head of Oxford Functional Neurosurgery, professor of neurosurgery at the University of Oxford and consultant neurosurgeon at The London Clinic

WHAT IS

It was more a case of slowly easing into the realisation that the 'pain' wasn't bothering me as it had been. I realised I no longer felt any need to reach for the bottle of liquid ketamine I always kept nearby. I am now off all pain medication, which is wonderful. I had been on a real cocktail of drugs to control the pain and was having to live with the side effects. Coming off them contributed a great deal to my improved quality of life.

In terms of the effect of the electrodes, it's quite strange in as much as the pain hasn't gone away. Instead, it has been transformed to a different kind of sensation. The key thing is that this sensation doesn't cause me discomfort or distress. The electrodes trick my brain into experiencing the sensation in a way that is not 'painful'.

Neuropathic pain Pain caused by damage or disease affecting the somatosensory nervous system.

Ketamine A medication primarily used for starting and maintaining anaesthesia. It induces a trance-like state, providing pain relief, sedation, and amnesia.

Anterior cingulate Part of the brain with connections to both the 'emotional'limbic system and the 'cognitive' prefrontal cortex. Somatosensory Part of the sensory system concerned with the perception of touch. Neuropathic pain is defined as pain resulting from injury to the brain or to the nerves that generate or transmit pain signals. What happens is that somewhere along the nerve pathways, nerves cells start firing out of control, which usually starts after some type of damage. It seems that because they have lost the type of signal input they normally receive, they become confused and just fire off signals at random, generating a sensation which the patient perceives as pain.

This type of pain has been described as a crushing or burning sensation. The patient can suffer from extreme sensitivity, where a slight touch can send a huge burst of pain through the body. It is not like the pain most of us are familiar with; in fact, almost all patients say that someone who isn't suffering from the condition would not recognise the feeling.

In Sean's case, despite successful surgery, some damage to his spinal cord remained, which was the cause of his condition. Because the injury was located so high up the spine, Sean feels the pain throughout his body. This meant that we could not target a specific region of the brain to reduce all of his symptoms. We needed something that would effectively treat his whole body.

The approach we took doesn't stop the nerve signals from reaching the brain, thereby stopping the pain, but it does change the way in which the brain interprets the signals when they arrive. When working well, it will transform the patient's perception of the signals. The 'pain' is being reduced to a neutral sensation, like touching a carpet. You can still feel something, but there are no negative emotions attached to the incoming signals. In effect, we diminish the emotional importance of the signals, so the patient no longer perceives them as distressing.

During the operation, we implant electrodes very precisely into both sides of an area of the brain called the anterior cingulate. We then run wires under the skin from the electrodes to the programmable pacemaker which powers them. We usually wait for six weeks for any post-operative swelling to calm down before turning on the electrodes, but Sean responded well enough to the procedure for us to turn them on after five weeks. The pacemaker sends a precisely calibrated electrical charge to the electrodes and the strength of the charge determines the effect the electrodes have.

So far, things have gone extremely well. The operation to implant the electrodes went smoothly and since switching them on I have been very pleased with the results. I will continue to be in regular contact with Sean so we can make the necessary adjustments to the settings to best manage his pain. It will take a little time, but we will find the precise power settings that mitigate Sean's pain as much as possible, allowing him to return to enjoying life to the full.

#### The London Clinic

20 Devonshire Place London W1G 6BW 020 7935 4444 thelondonclinic.co.uk



# NORTHERN OCHUENTERN OCHUENTERN AllDeinte North e 15 beeedbeetbeere

All Points North, a US-based healthcare provider, is setting up in the HSMA, bringing a hybrid model of care that sees mental health, addiction and physical health as fundamentally interconnected and requiring of simultaneous attention

Words: Gerard Gilbert





One of the biggest challenges within the mental health arena is it's very siloed. But our physical health impacts our mental health and they have to be treated concurrently.



"We're trying to be a central hub for concierge medicine and concierge health, partnering with local practitioners whenever we can," says Noah Nordheimer, founder of All Points North (APN) – a US-based company encompassing mental health, addiction treatment, trauma therapy and physical wellness. "The future of healthcare is a hybrid model."

Since 2020, Nordheimer has being putting his 'hybrid model' into practice at APN Lodge, a residential centre nestled in the Rockies in Colorado, USA. Here, teams focus on all aspects of clients' health – from nutrition and fitness to traditional therapy and cutting-edge, technological solutions.

"One of the biggest challenges in the mental health arena is it's very siloed," he says. "People generally focus on the immediate problem that's in front of them, but it's all interconnected. Our physical health impacts our mental health, and vice versa. They have to be treated concurrently."

Speaking ahead of opening a new APN centre in the Harley Street Medical Area, Nordheimer explained the origins of All Points North. "*Tve been in the field of behavioural health for 13 years now*," he says. "*Prior to that I was an affordable housing developer, so for the past 20 plus years I've been helping people improve their lives in one form or another.*"

While working as a developer, he built a company called Concerted Care Group, which delivered behavioural healthcare to the population he was providing affordable housing to. "This is really where my passion lies – disenfranchised, people below the poverty line in urban, innercity environments," he says. "As I did that, I became a resource for my family and my friends. So anytime anyone needed help with behavioural health or substance abuse, they came to me and I was referring them out to other facilities around the country. And then I started looking more deeply at where I was sending my family and my friends and I felt that we could do a better job. That was the genesis of building APN – I really built it for my family and friends."

With addiction, Nordheimer is a firm believer that there is often trauma being masked by the substance abuse. "That's the coping mechanism," he says. "It's easy to identify someone with an addiction. They drink too much, they're using drugs – Becky crashed a car... Becky's on drugs... we get Becky into treatment and 45 days later you realise that Becky was sexually molested for 10 years of her life... Becky's been trying to cope. A lot of places treat the symptoms and we're always looking for the root cause."

While traditional therapy retains a central place in the treatment offered by APN, it is only one part of a wide range of therapeutics on offer. "In our London facility we will offer everything from group therapy, individual therapy and medication management to our fitness concept, '9X' – a nine-person group fitness programme, massage therapy, reiki and yoga. A lot of these things happen in our Social Club by APN, which also runs events like going on a hike or going to sporting events together, things they'll do as a community..."

This social aspect is a way of giving some clients a way to get involved in the community, Nordheimer adds, especially important after the isolation caused by the pandemic. *"For others, it's people working to maintain their sobriety around other like-minded individuals."* 

Family therapy is another mainstay of APN's work. "Our family programme makes up about 40% of our telehealth business – the distribution of health-related services through telecommunication technologies. What we find is a lot of times the individual identified as suffering doesn't get well unless the entire family unit gets well. A lot of time, it's about teaching the



Clockwise from above: Deep transcranial magnetic stimulation for depression, sleep, and smoking; a 9x fitness studio, which brings heart-rate tracking to nine-person circuit classes; the reception area of the APN facility in Colorado





family how to support that person or getting that feedback on how the person is doing."

Their telehealth app, for example, helps track clients' progress, or lack of it. The company is an early adopter of new technologies, says Nordheimer, who is especially excited by deep transcranial magnetic stimulation (Deep TMS) – a treatment that will be available at the new HSMA facility.

"It has a coil that uses magnets to bring blood flow back to targeted areas of the brain that have lost blood flow," he explains. "It means getting neurons to fire again in places where they're not firing, and we can treat everything from obsessive compulsive disorder to major depressive disorder. There's even actually a mapping for smoking cessation. It's been the largest advancement in mental health, I would say, in the past 20 years."

Nordheimer adds that they've been seeing "tremendous results" by combining Deep TMS with traditional therapy. In the HSMA facility, guided ketamine-assisted therapy will also be offered. "At All Points North we're very interested in new technologies, new tools for the tool belt so to speak, but none of those things are replacements for what's tried, true and tested. Traditional therapy is not going to be replaced."

The London facility will be APN's first centre outside of the United States. Why did he choose the Harley Street Medical Area for the company's new venture? "We realised that there is a need there," he says. "Prior to the pandemic, 30 to 40% of our clients coming to our campus in Colorado for residential treatment for trauma depression and substance-use disorders and addictions were coming from the UK. Harley Street also appears to be a hub for the rest of Europe. A lot of people are being assessed in the London before going on for treatment in Switzerland or the US or other places. So, there's an opportunity for us to bring some resources to London as well."

Another attraction is the strength of the UK's behavioural health sector. "We've found a lot of great programmes and partners that we're excited to work with. So, we're hoping to be a good partner to what's already there, while at the same time bringing additional technology and skills that we've learned in the US."

However, one significant hurdle remains, he believes, and that is the stigma still attached – despite the conversation becoming more public in recent years – to the whole arena of mental health. *"We have to break that,"* says Nordheimer. *"Bringing mental health under the umbrella of health, because it is all interconnected, helps us to take that next step. The personal development field is exploding. Everybody is taking a workshop or a seminar or learning a new skill online and it's really exciting to them. But when it comes to mental health there is shame and there is guilt and their head tilts towards the floor.* 

"We've got to change the way people think about mental health. This is truly just improving yourself; it's trying to be the best version of yourself, learning something new about yourself and, actually, about others. We're really just giving people the skills to be more successful in life and I think that's a lot of what mental health is. My goal or vision for the future is that I hope in 10 years when somebody says 'health' they're talking about their mental health as well."

All Points North apn.com







#### Work

I am head of physiotherapy at isokinetic, a Harley Street clinic for the treatment and rehabilitation of sports and orthopaedics injuries. I have been working here for 10 years.

At the clinic, we have several different environments where patient can have treatment. I divide my hours between two of them: one is a normal open physiotherapy space, and the second is a hydrotherapy pool environment. I can see patients with a wide range of issues, including musculoskeletal injuries, and I sometimes provide postoperative physiotherapy care or just conservative treatment. One of the nice things about my job is that we see such a wide range of patients here. The people we treat range from highlevel professional athletes to patients who have never played sports but have suffered an injury.

#### Shop

I love Marylebone on High Street. It is like a normal high street but with very high quality shops. I enjoy walking along it even if I don't have to do any shopping. Two shops I really like to visit are The White Company and The Conran Shop. They both sell beautiful, well-made things; sometimes I'll buy something and other times I'll just look around. I also like how many small or unique shops there are in the area.

It may sound a little strange, but I really like the John Bell and Croyden pharmacy on Wigmore Street. There isn't another pharmacy like it. They're very professional, they're experts in what they do, but they also have such a wide variety of really useful, high quality products. I also enjoy the Paul Rothe and Son delicatessen on Marvlebone Lane. They sell a fantastic range of jams and honeys, which I like a bit too much!

### Culture

As I don't live in the area, I only tend to see Marylebone's cultural side during my breaks. One place I love is the Daunt bookshop. That's definitely my favourite place to go. I love reading and it is a wonderful place to explore, looking for new books. I love the architecture of the shop, the way it is designed inside. It feels like you're stepping into a different era, into a different world. You can immerse yourself in the place, see everything they have to offer, and find new things to read.

I pass by Wigmore Hall every day and it is such a lovely building. I have been into the hall but never been to see like a concert. That is something I have to change. It is definitely on my to-do list.

## Eat

First of all, I like the fact that there's so many different places you can go in Marylebone. In a a relatively small area, you can explore cuisines from so many different parts of the world. But I'm Italian, so I have to say I do like the Italian places the most. Probably my favourite restaurants are Caldesi and 2 Veneti, which is literally around the corner from where we work. I think as an Italian I do miss Italv sometimes, and both of those places are very authentic; it is like going into a restaurant at home. In my own lunchtime, one place that I really like is the new Lina Stores on the corner of Marylebone Lane. There is a real authentic Italian feel to their food, and I often go there to pick up something up for lunch. If they were not authentic, I would go somewhere else!

### Community

I come from a small town in Italy. As much as London is a wonderful city, an amazing place, it can sometimes be a bit overwhelming. Because of that, I really like the sense of a village that Marylebone has. When I come into work in the morning, I often see children in their uniforms going to school and people opening up their shops and cafes. It's a nice feeling. It also feels like I can get everything I need in a normal day without having to leave the area. I think it's quite important for me, the way Marylebone replicates that enclosed almost cosy feeling of a small town. The people here are so nice, and you start to recognise each other as you go about your day. When you go out there is such a nice vibe. It is busy, but in a good way - there are lots of things going on, but it's not too crazy like certain areas of London. It's like that feeling of home, that feeling of being enclosed in a space you feel comfortable, while the crazy city is somewhere out there.

### ISOKINETIC

11 Harley Street London W1G 9PF *isokinetic.com/en* 



# WHAT'S ON

### EXHIBITION

#### RADICAL ROOMS: POWER OF THE PLAN Until 24 September RIBA

66 Portland Place London W1B1AD architecture.com

Created through a special partnership between architect Charles Holland and visual artist Di Mainstone, Radical Rooms explores the power relations embedded within the layout of our domestic spaces, highlighting moments when the architectural plan has challenged or changed the conventions of domestic life.

### MUSIC

#### DAME SARAH CONNOLLY 28 September Wigmore Hall 36 Wigmore Street London W1U 2BP wigmore-hall.org.uk

Having previously performed in his operas The Silver Tassie and Twice Through the Heart, mezzosoprano Sarah Connolly introduces the London premiere of a new work by Mark-Anthony Turnage, Songs of Sleep and Regret. Accompanied by pianist Joseph Middleton, she will also be performing songs from the Second Viennese School, as well as Chausson's rapturous cycle Poème de l'amour et de la mer.

## THEATRE

#### TEARS, TREACHERY... AND JUST A LITTLE MURDER 16 October

The Hellenic Centre 16-18 Paddington Street London W1U SAS helleniccentre.org

In a play written and directed by David Stuttard, actors Dame Siân Phillips and Stephen Greif give voice to the different responses of male and female figures in classical Greek literature as they experience heightened emotions of love, desire and hate. Very little, it seems, has really changed in the intervening 2,000 years – only the scenery.

## FOOD

#### MERRY MARYLEBONE CHRISTMAS LIGHTS & SHOPPING EVENT 10 November

Marylebone Village marylebonevillage.com

Marylebone Village's Christmas season kicks off with the traditional celebrity switch-on moment: the centrepiece of a whole day of festive activities and offers. Marylebone High Street and much of the surrounding area will be pedestrianised to make way for the usual live music, children's activities, stalls, and charity fundraisingon behalf of Mind Brent, Wandsworth & Westminster. Dozens of retailers and restaurants will be offering promotions, experiences, gifts and special menus.





Richard III has been portrayed in literature, theatre, art and film as an archvillain, a usurper and a murderer of children, but the truth is far more nuanced.

### EXHIBITION

#### THE LOST KING Until 8 January

The Wallace Collection Manchester Square London W1U 3BN wallacecollection.org

Since the 16th century, King Richard III (1452-85) has been portrayed in literature, theatre, art and film as an arch-villain, a usurper and a murderer of children, but as with all such vivid characterisations, the truth is far more nuanced. This free display explores how key objects at The Wallace Collection have influenced perceptions of the Yorkist king. Visitors will also get the opportunity to view the replica armour created for The Lost King, the new film about the search for Richard III's burial place.

TheLostKing





Places for breakfast

in Marylebone

**THE MONOCLE CAFÉ** 18 Chiltern Street London W1U 7QA *cafe.monocle.com* 

Step into this stylish Japanese/ Scandinavian-inspired cafe for specialty Allpress coffee and a unique breakfast menu. Indulge in the popular 'egg sando' (egg salad in lightly toasted Japanese bread), Swiss bircher muesli, red bean curd on toast, or even a breakfast miso soup. The Monocle Café is a spin-off from the magazine and media brand of the same name, the vision of design consultant and publisher Tyler Brûlé. The small but welcoming space has some well-chosen literature and high-end goods on display, and the international Monocle radio station whirling away in the background.

**GINO'S COFFEE BAR** 69 Welbeck Street London W1G OAT

The much-loved Gino's, in place since 1932, is the go-to breakfast place for those in need of a proper English breakfast to kick-start their day: bacon, eggs, sausages, beans, chips and toast, washed down with tea and coffee, all at an extremely reasonable price. Located opposite Marylebone station and the nearby Landmark Hotel, it attracts hungry commuters, high-profile visitors and celebrity chefs alike. It retains a low-key but somewhat 1920s ambience, punctuated with interesting paintings, little tables and high stools overlooking the street and the world beyond. Like the breakfast itself, Gino's is a timeless classic.

# THE IVY CAFÉ

96 Marylebone Lane London W1U 2QA *theivycafemarylebone.com* 

The Ivy brand is synonymous with elegance and sophistication. And so, as you would expect, is this breakfast menu. Designed by executive chef Mark Askew, it comprises of traditional favourites such as eggs benedict, a lavish full English (including vegetarian and vegan options), and fluffy American pancakes with bacon – because, why not? It's a romantic setting with low lighting, an Art Deco design and pictures of Regent's Park and surrounding areas.

### LA FROMAGERIE

2-6 Moxon Street London W1U 4EW *lafromagerie.co.uk* 

Patricia Michelson began her cheese business with a wheel of Beaufort Chalet d'Alpage, discovered while she was skiing in Meribel. Her Marylebone cafe and shop offers an array of delicious breakfasts, served until noon. Baked goods include croissants, crumpets, brioche and sourdough with farmhouse butter and homemade jam. For a healthier start to the day there is porridge, muesli and fruit pots. Or for something a bit more indulgent, try the bacon sandwich with smoked pancetta, or the smoked salmon pâté.

#### BOXCAR

7A Wyndham Place London W1H 1PN *boxcar.co.uk* 

Boxcar bakery and deli is a delightful independent business, serving ethically sourced British produce from independent farms. The smell of freshly baked bread and pastries will lure you in, and the homemade granola, coconut porridge, waffles and eggs will ensure you return. The on-site bakery uses traditional methods to produce cakes, pastries and breads, from granary to beetroot sourdough. Enjoy buttery croissants or yogurt parfaits inside a cosy rustic environment, or outside under the green and white striped awning.



# THE GUIDE Places to see art close to the HSMA

#### THE GALLERY OF EVERYTHING

Bring your children, bring your child-like self, leave your worries at the door and immerse yourself in sumptuous art from a wonderfully diverse group of international creatives. Humour, exploration and playfulness run amok in the atmospheric and somewhat quirky listed building, spanning two floors. The artists are all non-academic; some might consider their work "outsider art". Whatever terminology you want to apply, your imagination will be tickled by the tactile, thought-provoking and joyful pieces on display. Works both new and old shine in this unique space on Chiltern Street.

#### THE WALLACE COLLECTION

The Wallace on Manchester Square is an oasis in central London. Presented in the former townhouse of the Seymour family, the collection houses an extensive range of armoury, East Asian and European artwork, including significant collections of 17th century Flemish and Dutch paintings and 18th century French art and furniture. It's an unmissable visit if you come to London, and even if you're living in London, it's a gift that keeps on giving. There is a beautiful café in the courtyard and there are free highlight tours every day. The guides are passionate, incredibly knowledgeable and welcoming.

### CLARENDON FINE ART GALLERY

Clarendon Fine Art on Marylebone High Street represents contemporary and 20th century fine art and sculpture. It sells limited-edition prints as well as original paintings by a range of artists from across the world. The Marylebone gallery, one of 30 Clarendon Simultaneously soothing and energising, the jaggedart collection is housed in a beautiful interior which evokes a sense of space and serenity. galleries in the UK, hosts a plethora of clients who come in for private views, commissions and special events. The gallery is rehung every week, so there is always something new to look at. As well as representing contemporary artists, the gallery has a wonderful collection of pieces from 20th century artists including Pablo Picasso, Salvador Dali and Henry Moore.

## JAGGEDART

Approaching its 20th year, Andrea Harari's charming Devonshire Street gallery is currently celebrating its artists' use of organic materials, exploring wind, wood and water. Simultaneously soothing and energising, the collection is housed in a beautiful interior which belies its actual dimensions by evoking a sense of space and serenity. There are ceramics, sculpture, woodworks, textiles, works in paper, print and painting, all of which tell a story. The display changes every three or four weeks.

#### THE SERPENTINE GALLERY

Established in 1970, the Serpentine Gallery was designed by Zaha Hadid Architects in 2013. It comprises of two galleries five minutes' walk from each other on either side of the Serpentine Bridge in Kensington Gardens. It presents worldrenowned exhibitions of art, architecture and design throughout the year. Currently on display at the Serpentine Pavilion is Black Chapel by Chicagobased visual artist Theaster Gates - a structure made of timber and clad in dark roofing membrane in honour of Gates's father, who ran a roofing company. As well exhibitions and installations, the Serpentine Gallery offers multiple events, workshops and other public programmes.



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