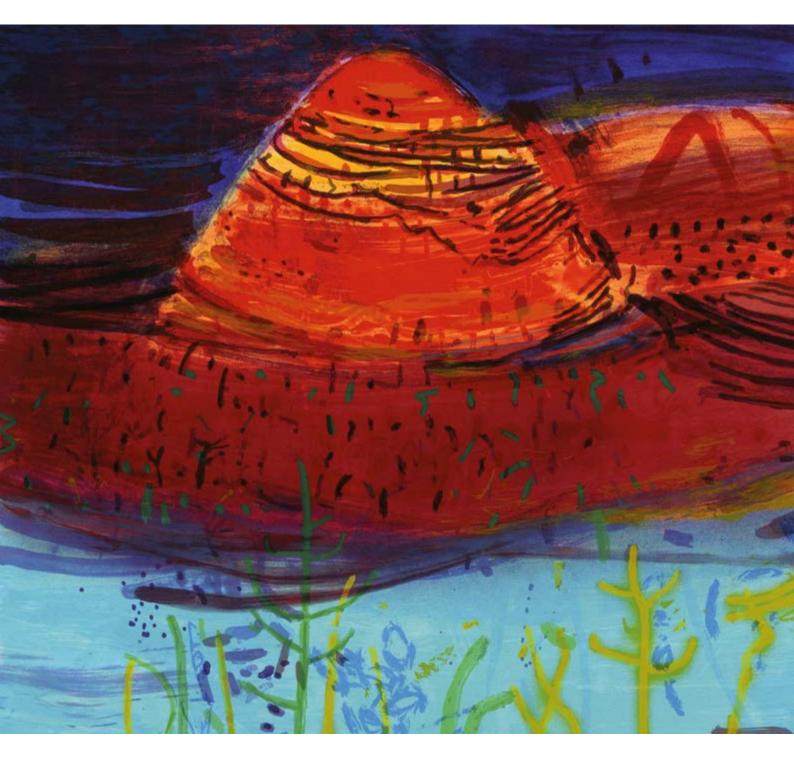


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QUARTER THREE / 2019

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Cover image

Autumn sierra, Barbara Rae Print, 2011

Acclaimed painter and printmaker Barbara Rae studied at Edinburgh College of Art during the Sixties, and after a brief spell as an art teacher, worked as a lecturer at Glasgow Scool of Art. Landscape is important in her work, and her bold, bright style brings another dimension to the subject.

Art in Healthcare (formerly Paintings in Hospitals Scotland) works with hospitals and healthcare communities across Scotland to encourage patients, visitors and staff to enjoy and engage with the visual arts. For more information visit www.artinhealthcare.org.uk Scottish Charity No SC 036222.



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Insight is published quarterly by The Medical and Dental Defence Union of Scotland, registered in Scotland No 5093 at Mackintosh House, 120 Blythswood Street, Glasgow G2 4EA. Tel: 0333 043 4444 Fax: 0141 228 1208 Email: General: info@mddus.com Membership services: membership@mddus.com Marketing: marketing@mddus.com Website: www.mddus.com The MDDUS is not an insurance company. All the benefits of membership of MDDUS are discretionary as set out in the Articles of Association. The opinions, beliefs and viewpoints expressed by the various authors in Insight are those of the authors alone and do not necessarily reflect the opinions or policies of The Medical and Dental Defence Union of Scotland.



Dr Barry Parker

WELCOME to the first print/digital format issue of *Insight*. We have taken this step in recognition of the new ways readers now wish to access information and also with a view to reducing our environmental impact and managing costs – over 90 per cent of the cost of producing a print edition of *Insight* is in paper and postage.

I hope you enjoy reading the digital edition and exploring the additional links provided with many of the articles. As this is a new development, we would be pleased to receive any suggestions or feedback.

In this issue (p. 10) we mark the 50th anniversary of Neil Armstrong's first steps on the moon by looking at current plans to

"Over 90 per cent of the cost of producing a full print edition of *Insight* was in paper and postage" return to the lunar surface and beyond to Mars. We take a look at at some of the medical challenges in human space flight – and the potential benefits from future exploration.

Over the last decade, surgical mortality in Scotland has fallen by 36 per cent. On page 12 we speak with surgeon and safety expert Manoj Kumar on the

Scottish implementation of the WHO Surgical Safety Checklist and its impact in terms of lives saved. On page 14, Doug Hamilton looks at the cost of perfection in cosmetic dentistry – as much for the clinician as for the patient.

Joanne Curran (p. 8) considers how the various UK devolved governments are promoting the ideal of preventative medicine and self care in order to address increasing NHS demand and costs. Our regular risk feature (p. 9) considers how members involved in research trials can avoid common pitfalls.

Our page 20 dilemma concerns a conflict in personal beliefs, and our regular ethics column (p. 21) is about summoning the courage to speak up and raise concerns. *Dr Barry Parker*

News

Sustained growth in a challenging year

MDDUS is reporting yet another year of sustained membership growth despite numerous external challenges and distractions.

Figures from the MDDUS 2018 annual report reveal a growth in total active membership of over eight per cent compared to the previous year, taking that figure to 49,263. Whilst growth continued steadily in Scotland, across the rest of the UK, there was a rise of four per cent in GP membership, a 32 per cent rise in GDP membership and a 19 per cent rise in hospital doctor membership.

During the strategic three-year period 2016-2018:

• membership rose by 36 per cent

• hospital doctor membership rose by 66 per cent outside of Scotland (10 per cent in Scotland)

• GDP membership rose by 107 per cent outside of Scotland (12 per cent in Scotland).

MDDUS chief executive Chris Kenny commented: "In a period of uncertainty and multiple distractions, we are

delighted to report yet another year of growth across our GP, hospital doctor and dental membership.

"We remain the fastest growing dental indemnifier in the UK. While others reduce their service levels and new entrants force their members to meet the extra cost of insurance premium tax, our mix of premium service and financial strength gives the best blend for the future.

"Despite the uncertainty introduced by the experimental and unproven Clinical Negligence Scheme for General Practice (CNSGP) in England and the General Medical Practice Indemnity (GMPI) in Wales, the number of GPs putting their trust in our professionalism, responsiveness and value continues to increase.

"To ensure our members continue to have full protection, we introduced

a new product – General Practice Protection. This product was welcomed by members and the primary care team, addressing their wider needs not covered by CNSGP and GMPI.

"We continue to provide expert advice and support and in the last 12 months our medicolegal advisers handled more than 6,500 calls and opened more than 4,000 cases relating to issues that are not included in the Government schemes.

"NHS Resolution does not cover non-NHS work, GMC hearings, disciplinary investigations and representation at inquests, nor do they include advice and support – something highly prized by MDDUS members. It's our record in these areas which is also making hospital doctors flock to us, in addition to the value and expertise we offer for those working in the private hospital sector.

"The first half of 2019 is already showing a continuation of this success story."



Sorry to see you go

MDDUS is saying goodbye to three longstanding members of staff, part of the lifeblood of the organisation for the last nearly 40 years.

Dr Gail Gilmartin will be retiring this month from her role as medical and risk adviser. Gail graduated from Liverpool University and joined MDDUS in 1991 after working in general practice and various other specialist areas.

Gail worked over the years with other longstanding MDDUS advisers including Dr Ian Simpson and Dr Jim Rodger. Her expertise and wise and personable counsel to members (not to mention her writing skills) will be sorely missed by all.

In August, Leslie Hamilton and Karen Crainie also retired from the membership team after a combined service of 72 years. Leslie joined MDDUS in 1980 when the union had 13,078 members and the total subscription income for the year was £785,500. Today total MDDUS membership is well over 55,000 and the annual subscription income in 2018 was £133.6m. Both Leslie and Karen have contributed to this growth.

Karen started work at MDDUS in 1986 and recalls when members would queue up to pay their renewals in person, with the membership team swiping credit cards on a manual imprinting machine. It's a much different world today with our online membership portal for renewal and payments – though in 2018 the team still dealt with 52,885 calls from members and potential new members.

All of us at MDDUS are sad to see our colleagues go but wish them all the best in no doubt busy retirements.

Request a speaker or training event

THE MDDUS Training & CPD team hold events in our Glasgow and London offices on a range of key topics. We also often work with partner organisations such as the Royal College of GPs and Capsticks to deliver relevant workshops across other areas of the UK.

As a member you may not realise that we can often bring training workshops to your local area. Members can submit requests to host a training event on a topic of your choice – from confidentiality and complaints handling to risks in general medical/dental or hospital practice. Local training courses can be delivered for a daily fee or for a per delegate rate based on your preferences and available local arrangements.

We also consider all requests for MDDUS speakers as part of a local, regional or national conference or training event.

Go to tinyurl.com/y23yhj7k to find out more.

Nuffield Health appoints MDDUS as sole indemnity provider

NUFFIELD Health has appointed MDDUS as its single indemnity insurance provider for employed GPs and health assessment doctors. Previously working with three providers, the UK's largest healthcare charity made the decision to partner with a single provider across its network to provide standardised cover and service to its doctors.

The new partnership, which went live on 1 September 2019, aims to ensure Nuffield Health GPs feel protected and offers Nuffield Health a medicolegal partner for expanding products and services. The partnership will provide a seamless sign-on process for GPs, and MDDUS also provides enhanced membership benefits, including specialist continuing professional development (CPD) in medicolegal claims management, bespoke training and additional CPD training.

MDDUS was selected following a comprehensive tender exercise, proving the best fit in terms of values, partnership vision, and cost.

Nuffield Health's Charity and Medical Director, Dr Davina Deniszczyc said: "This is a really positive step forward for us; having MDDUS as a medicolegal partner will help to develop additional support for our doctors and provide them with further CPD opportunities to benefit from."

Chris Kenny MDDUS Chief Executive said: "We are delighted to be working in partnership with Nuffield Health to provide clinical indemnity for their GPs, as well as wide range of medico-legal advice and support. MDDUS was chosen from this competitive tender because of the high quality advice, professional development opportunities and bespoke training that we offer which is already highly valued by our nearly fifty thousand members across

Nuffield Health operates 31 hospitals, 112 fitness and wellbeing clubs, healthcare clinics, and over 165 workplace wellbeing services with 94 per cent of its hospitals judged good or excellent by national regulators.

the UK."

SAFEGUARDING REPORTS

THE Department of Health and Social Care has confirmed that the compiling of safeguarding reports for NHS patients will now be included within scope of the CNSGP in England. It was initially thought that they should be deemed to be private work and therefore out of scope - but in response to lobbying the DHSC has accepted that these statutory reports should be reimbursed by the system.

© UK INFECTED BLOOD INQUIRY

THE UK Infected Blood Inquiry (UKIBI) was set up to examine why patients in the UK were given infected blood and/or blood products. Requests for a written statement will be made to those persons from whom the inquiry proposes to take evidence. If you receive such a request in Scotland, immediately contact Tracey Turnbull at the Central Legal Office (tracey.turnbull@nhs.net). In the rest of the UK, please contact the MDDUS advice line.

JASON LEITCH RECEIVES CBE

MDDUS board member Professor Jason Leitch has been awarded a CBE. Dr Jonathan Berry, chair of MDDUS, said that he is delighted Jason has been recognised for his work in patient safety. "He is an internationally recognised expert in healthcare quality and since his appointment as National Clinical Director of Healthcare Quality and Strategy for Scottish Government in 2015 he has been instrumental in ensuring that NHS Scotland is at the leading edge of this important work." .

Digest



Clarity on firearms licensing

GPs will not be held legally responsible for judging whether someone is suitable to possess a firearm or shotgun certificate, under new government proposals.

The Home Office has launched a consultation on statutory guidance which makes clear that legal responsibility rests "solely with the police".

Under the guidelines, police in England, Scotland and Wales will be required to check the medical records of every person applying for a firearms licence. The move comes in response to findings by the independent police inspectorate, HMICFRS, that licensing practice across the country was inconsistent and that medical information was not being shared for firearms applications, creating a potential safety risk.

The Home Office has signed an agreement with the British Medical Association (BMA) that aims to improve cooperation between the police and GPs.

Welcome response to regulation reform

MDDUS has commented on the Department of Health and Social Care response to its long-running consultation on *Promoting professionalism, reforming regulation*. New legislation is promised that will allow healthcare regulators such as the GMC to resolve fitness to practise (FTP) cases more quickly - among other changes.

MDDUS Director of Advisory and Legal Services Emma Parfitt said: "MDDUS welcomes this announcement by UK Government and a clear direction of travel to address these important issues. The focus is now on improved regulatory governance and removing GMC rights of appeal, rather than redesigning the governance architecture. We very much support UK Government's acknowledgement of the need to be more responsive to the constantly changing needs of healthcare, being supportive of a flexible workforce whilst continuing to protect the public.

"The prioritisation of changes for a modern fitness to practise process is also welcome, including the need to see a better process for the professionals involved through quicker decisions and early resolution for all parties. We support members through these difficult issues and we know that this is what will make a difference for everyone involved.

"However, it has taken a considerable time to get to this point, with the promise of further consultation on some challenging secondary legislation. MDDUS and the professions now await a clear timetable with early action that will deliver these important changes."

Discount rate change not far enough

THE Lord Chancellor recently announced a change in the discount rate applicable to personal injury lump sum compensation payments from minus 0.75 per cent to minus 0.25 per cent. MDDUS believes this is in no way sufficient to reduce the high cost of clinical negligence claims.

In 2017 the UK Government lowered the personal injury discount rate from 2.5 per cent to minus 0.75 per cent and the Scottish Government followed suit. The effect was to increase the amount of damages paid to claimants in cases involving loss of future employment and long-term care costs, in some cases significantly.

MDDUS chief executive Chris Kenny commented on the recent annoucement: "We are extremely disappointed as this small increase to the rate set by the Lord Chancellor does not go far enough and will continue to create over-compensation.

"We fully accept that there must be reasonable compensation for patients harmed through clinical negligence, but this needs to be balanced by society's ability to pay and be fair to claimants and defendants alike. This new rate is likely to encourage more poorly based claims and therefore add to the personal and financial burden on individual clinicians and add cost to the NHS as a whole in the long-term.

"Figures from the NHS Resolution annual report in July reveal that the cost of claims to the NHS continues to rise. The projected £80m saving as a result of this announcement, even if it arises, is a drop in the ocean compared with £2.4 billion paid out during 2018/19. This is clearly an enormous strain on the NHS and Government should be focusing on legal reform to drive down these rising costs – something for which MDDUS has been campaigning for some time."

Asthma deaths rise

DEATHS from asthma attacks in England and Wales have increased by a third in the last decade, according to data from The Office for National Statistics (ONS).

Analysis of ONS data by the organisation Asthma UK has found that more than 1,400



people died from an asthma attack in 2018, an eight per cent increase over 2017. Asthma deaths amongst people aged 35-44 increased by 42 per cent in the last year. Around 4.8 million people in England and Wales have asthma.

Asthma UK says a lack of basic asthma care may have contributed to the rise, as 60 per cent of people with asthma in England and Wales (an estimated 2.9 million) are "not receiving basic care as recommended by national guidelines". The National Review of Asthma Deaths (NRAD) has found that two-thirds of asthma deaths could have been prevented by better basic care – and out of 19 recommendations made by NRAD, only one has been partially implemented.

Kay Boycott, Chief Executive of Asthma UK, said: "The NHS must act now to ensure that everyone with asthma in England and Wales gets basic asthma care which includes a yearly review with their GP or asthma nurse, a check to ensure they are using their inhaler properly and a written asthma action plan."

One in 20 exposed to preventable harm

AROUND one in 20 patients are exposed to preventable harm in medical care, with as many as 15 per cent of these cases involving severe harm or death. These are the findings of UK-led research published in the *BMJ*.

The team behind the study called for more measures that specifically target incidents of preventable patient harm rather than overall patient harm.

Researchers from Manchester and Nottingham conducted a systematic review and meta-analysis to estimate the prevalence, severity and nature of preventable patient harm across a range of medical settings. Their analysis included 70 observational studies, involving a total of 337,025 patients.

The pooled prevalence for preventable patient harm was six per cent, while a pooled proportion of 12 per cent of preventable harm was severe or led to death. Incidents related to drugs were found to account for the largest proportion of preventable harm (25 per cent). Compared with general hospitals, where most evidence originated, preventable patient harm was more prevalent in specialties such as intensive care or surgery.

They concluded: "Our findings affirm that preventable patient harm is a serious problem across medical care settings. Priority areas are the mitigation of major sources of preventable patient harm (such as drug incidents) and greater focus on advanced medical specialties."

Pharmacists to treat minor conditions

PATIENTS in England are to be offered same-day pharmacy appointments for minor conditions to ease pressure on the NHS.

The Department of Health and Social Care has announced that the new NHS Community Pharmacist Consultation Service will offer local pharmacy appointments to anyone calling NHS 111 about minor conditions, such as earache or a sore throat. GPs and A&E could start to refer patients to the service

over the next five years if testing is successful.

Patients will still have the option to see their GP or attend A&E, but it is estimated that up to six per cent of all GP consultations could be safely transferred to a community pharmacy, equivalent to 20 million appointments per year.

years of training which provides expert knowledge on medicines and drug interactions, and the NHS wants to make better use of these skills.

Professor Helen Stokes-Lampard, Chair of the RCGP, commented: "Whilst this new scheme is welcome, it is not a silver bullet to addressing the pressures in primary care. Pharmacists – or any other primary care professional – must not be seen as substitutes for GPs, so efforts to recruit more family doctors, retain the existing GP workforce, and make it easier to return to practice after a career break or period working abroad must continue and be redoubled."

Wrong-site blocks no longer "never events"

DENTISTS in England will no longer have to report giving a local anaesthetic at the wrongsite as a "never event".

NHS England and NHS Improvement have agreed that wrong-site blocks will be regarded as patient-safety incidents but do not meet the threshold of a "never-event", which are defined as wholly preventable and with the potential to cause serious harm or death.

Chair of BDA's General Dental Practice Committee, Dave Cottam, said: "The original classification of a wrong-site block as a neverevent was akin to using a sledgehammer to crack a nut.

"It's gratifying that NHS England and NHS Improvement have agreed to a pragmatic and sensible change without compromising on patient safety."

GMC TO REGULATE ASSOCIATE ROLES

The GMC will become the regulator for physician associates and anaesthesia associates, the DHSC has announced. Work has now begun on timescales for the new function. Charlie Massey, GMC chief executive, said: "We are pleased the four UK governments have made a decision about who should take this important work forward. We have been clear that costs should not be borne by doctors."

♥ FREE DENTAL COMPANION APP

The Scottish Dental Clinical Effectiveness Programme (SDCEP) has launched a new app providing access to evidence-based dental clinical guidance. It includes four 'toolkits' based on the SDCEP publications covering periodontal diseases, anticoagulants/ antiplatelet drugs, medication-related osteonecrosis of the jaw, and dental caries in children. Download the app free on Google Play or the Apple App Store or access a desktop version on the SDCEP website.

♥ AVOIDING ARTHROPLASTY PITFALLS

Best practice documents on both hip and knee arthroplasty are now available on the Knowledge Hub of the British Orthopaedic Association (BOA) website. They have been developed by a working group comprising the BOA, the GIRFT (Getting It Right First Time) programme, NHS Resolution and other bodies, including MDDUS. Access at www.boa.ac. uk/knowledge-hub.html

BRIEFING

PERSONALISED PREVENTION

Joanne Curran

Associate editor of MDDUS Insight magazine



ROM taxing milkshakes to a new levy on tobacco firms, the latest in a series of government health strategies has been published. Lagging behind his counterparts in Scotland and

Wales, health secretary Matt Hancock finally unveiled his proposals to tackle the causes of preventable ill health in England in Advancing our health: prevention in the 2020s.

For such an ambitious document – one of its goals is to achieve a "smoke-free England" by 2030 – it was published on a Monday evening without fanfare. This may be symptomatic of the recent change in Conservative party leadership, with former Prime Minister Theresa May showing much more enthusiasm for levies on unhealthy products such as cigarettes and sugary drinks than her successor Boris Johnson.

Despite Mr Johnson previously questioning the effectiveness and fairness of so-called "sin taxes", the report does not shy away from a challenge.

The 2020s, it says, will be the decade of "proactive, predictive and personalised prevention". It pledges more targeted support, tailored lifestyle advice, personalised care and greater protection against future threats. It boldly states that patients in the coming decade will not be passive recipients of care, but "co-creators of their own health" whose vital signs will be monitored remotely by smart devices.

The challenge, the report acknowledges, will be to equip patients with the "skills, knowledge and confidence they need to help themselves", emphasising that it is crucial healthy choices are made as easy as possible for people.

Genomics and artificial intelligence, two of the many technological advances championed by Mr Hancock in recent months, get an early mention with plans to make the UK "the home of the genomic revolution" in delivering "precision medicine". Greater use will also be made of targeted advice campaigns on social media, and screening programmes will use technology to become more "intelligent".

Smoking, obesity and mental health also feature prominently. Among the measures proposed to tackle these are a ban on the sale of energy drinks to under-16s and extending the sugar tax from soft drinks to



other highly sweetened products such as milkshakes.

The report proposes giving tobacco firms "an ultimatum" to make smoked tobacco obsolete by 2030, with smokers quitting or moving to less risky products such as e-cigarettes. Firms could also be asked to pay a levy towards treating people who develop smoking-related diseases. And there are many other proposals besides.

But while the strategy for England is still in the consultation stage with the government response not expected until October 2020, the Scottish and Welsh governments have already published and begun to enact their health prevention plans.

Recent media headlines announced the implementation of a ban on the sale of high-energy drinks to under-16s in publicly funded leisure centres across Scotland. This comes less than three months after a similar ban was imposed in all Scottish hospital retail units and NHS-run catering sites. What's more, in May 2018 Scotland became the first country in the world to introduce a minimum unit price on alcohol. Figures published in June 2019 found alcohol sales in the country had hit a 25-year low.

In June 2019, the Scottish Government announced plans to raise nutritional standards in schools by autumn 2020 to include more fruit and vegetables and less processed red meat and sugar. This includes the removal of fruit juice and smoothies and the addition of fruit and vegetables to tuck shops.

The move was welcomed by the Royal College of Paediatrics and Child Health (RCPCH) who said: "More than 28 per cent of children in Scotland are overweight or obese, and with research telling us that the food and drink they see strongly influences the food choices they make and how much they eat, this is a positive move that will help in the fight against obesity."

The College called for such measures to be adopted more widely, saying: "Obesity is an issue that has rippled through communities, not just in Scotland but right across the UK. It is contributing to rising numbers of children suffering with associated conditions like type two diabetes and breathing problems.

"We now need to see our neighbouring governments follow Scotland's lead by mirroring this move".

Positive moves are afoot in Wales too. The Our Healthy Weight: Healthy Wales strategy is due to be launched in October 2019 and will include measures to reduce obesity and encourage healthier lifestyles. It looks set to follow Scotland in banning energy drinks to under-16s and to restrict the promotion and marketing of unhealthy products – including multibuy discounts – in shops.

So while the health secretary's plan for England is full of bold statements and ambitious intentions, he still has a way to go to catch up with other parts of the UK. Such a strategy would be tough to implement effectively even with 100 per cent support from key stakeholders, so one can only hope there is sufficient appetite to take on this challenge to transform healthcare in the 2020s.

RISK

RESEARCH TRIAL PIFALLS

Dr Gail Gilmartin

Medical and risk adviser at MDDUS



EDICAL research and drug trials are an essential part of healthcare development. In its guidance Good practice in research and Consent

to research, the GMC states: "Research involving people directly or indirectly is vital in improving care and reducing uncertainty for patients now and in the future, and improving the health of the population as a whole". However, involvement in research trials should not be undertaken lightly, and the responsibilities which go along with such trials should be met with appropriate rigour.

MDDUS receives a significant number of calls from members in regard to problems associated with research trials. These can range from participant complaints to more serious allegations of fraud. Complaints often arise around issues of communication and include concerns about the lack of clear information and inappropriate disclosures to others. Allegations can also centre on the skills or actions of those directly involved, particularly if the research involves taking physical measurements or carrying out minor procedures.

At the more serious end of the spectrum, allegations and complaints may be made to the regulators. The GMC usually regards proven research fraud as a significant departure from good practice, and a finding of impaired fitness to practise can be expected in order to maintain public confidence. Suspension or erasure will be likely outcomes for serious and/or repeated departures from good practice guidelines.

The safety and dignity of patients is always paramount and GMC guidance (Good Medical Practice) regarding honesty must underpin any research activity: "You must act with honesty and integrity when designing, organising or carrying out research, and follow national research governance guidelines and our guidance".

PREPARATION

Adequate preparation is key when embarking on a research project. In addition to ensuring that you have fully understood all the relevant documentation, the following areas merit consideration:

Is the trial useful/interesting? This may seem an odd question but if a trial is to run over some time and requires significant effort, there needs to be adequate continuing motivation. Unfortunately, we have seen cases where doctors have become bored or overwhelmed, and in order to progress the research they have cut corners. This can amount to fraud, with serious consequences.

Is the research based on a sound protocol? GMC research guidance states: "You must make sure that research is based on a properly developed protocol that has been approved by a research ethics committee. It must be prepared according to good practice guidance given by government and other research and professional bodies... Guidance on whether research requires ethical review under either the law or the policy of the UK health departments can be found on the National Research Ethics Service website."

Do you have adequate time and resources, and the requisite level of expertise to carry out the research? These considerations also apply to anyone delegated tasks.

Do the patients fully understand what is involved? Central to all the cases reported to MDDUS is the issue of communication, both amongst clinicians and particularly with the



patients involved. In many cases, great reliance is placed on the patient information sheet and consent is obtained after the patient has reviewed and understood it. This is an important part of the process but does not remove the need to ensure that patients fully understand what the research entails and any associated risks. This requires direct discussion and the opportunity for any participant to raise questions.

Do the patients understand who will be made aware of their involvement in research to avoid allegations of breach of confidentiality? The GMC states in its research guidance: "With the participant's consent, you should usually inform their GP and other clinicians responsible for their care about their involvement in a research project, and you should provide the doctors with any other information necessary for the participant's continuing care. You should follow this advice regardless of whether the participant is a patient or a healthy volunteer". In cases where clear consent has been obtained, breach of GDPR is unlikely, but care should be exercised where anonymised or pseudo-anonymised data is used. If a patient can be identified and a breach occurs, the Information Commissioner's Office (ICO) may need to be informed.

Is your record keeping adequate? Clear and accurate records are essential for any research, to support it at the time and possibly as evidence years later.

CONFLICTS OF INTEREST

Another area which can cause difficulties and attract criticism is conflict of interest. GMC guidance (*Financial and commercial arrangements and conflicts of interest*) states you should identify and avoid conflicts of interest that arise wherever possible, and declare conflicts to anyone affected, formally and as early as possible, in line with the policies of your employer or the organisation contracting your services. You should also seek advice on the implications of any potential conflict of interest and ensure it does not affect decisions about patient care.

The GMC further states that any actual or potential conflicts of interest should be declared to a research ethics committee, other appropriate bodies and the participants, in line with the policy of your employing or contracting body. T'S 50 YEARS since Apollo XI delivered Neil Armstrong and Buzz Aldrin onto the cratered surface of the moon, and the world's most famous split infinitive "to boldly go" is as inspiring and relevant today as it was then – perhaps more so as space scientists pursue the dream of manned spaceflights to Mars.

But even as researchers conjure the out-ofthis-world technology needed to realise this dream, they must also continue to address what is possibly the weakest link in the 140-million-mile chain to Mars: the human body and its reliance on gravity. In space, oxygen can be supplied, just as on Earth, atmospheric pressure likewise, but a human without gravity is pretty much like a fish out of water.

In low or zero-gravity environments, vestibular feedback goes awry, with dizziness, headaches and instability. Muscles begin to waste away. Blood volume is reduced, as is the size of the heart which is not having to pump as hard. Changes in ocular pressure can affect eyesight. Bone density is badly hit – astronauts lose around one per cent of bone mass a month. They also tend to stretch, by as much as 6cm, without the normal compression of the intervertebral discs. Consequently, most suffer from low back pain and all are at risk of severe spinal injury for the first year post-mission.

MICROGRAVITY MITIGATION

With increasing distance and time in space, the challenges become greater. What will be the effects of years spent in low-gravity environments? How can these be mitigated? These are among the questions scientists like Nick Caplan, a professor of aerospace medicine and rehabilitation at Northumbria University, are trying to answer. He's been working on the problem of deconditioning of the body, particularly of the spine, among space travellers for 10 years.

He explains: "Under gravity, the muscles around the spine have to work continuously to keep it upright so you don't collapse into a heap. In space, spinal muscles become weaker because you don't need them to keep the spine upright. We're looking at how to restore these muscles after space flights."

To this end, Caplan has developed a rehabilitation device known as the Functional Re-adaptive Exercise Device (FRED) – a cross-trainer with a difference. Unlike those you'll see in the local gym, FRED is not about cardiovascular fitness. "The muscles around

Adam Campbell looks at the challenges of human space flight and how related research is benefiting healthcare on Earth the spine fire at low levels all the time. We're not trying to fatigue the body to train them. We're trying to promote their continuous activation."

He uses a combination of MRI and intramuscular electromyography to monitor spinal muscle structure and function, and changes under deconditioning and rehabilitation.

Because of the link between space travel and back pain – and because astronauts are extremely busy people – early work on FRED recruited a cohort with low back pain as surrogates. Now, Caplan and his team are getting ready to take part in a 60-day bedrest study supported by the European Space Agency (ESA). Participants will lie at an angle of 6° with their heads below their feet.

"Bedrest studies are seen as the most valid simulation of spaceflight if you want to look at long-term changes to the human body, in terms of the muscles, bones, cardiovascular system," he says. He'll monitor the subjects before and immediately after the bedrest, and again after two-weeks' training on FRED to see if this "kickstarts the muscle control pathways".

As part of the same experiment, a proportion of the participants will spend 30 minutes each day on a near-horizontal 'short-arm centrifuge'. The aim is to see whether mimicking gravity by spinning the participants at 30 rpm will help to reduce the deconditioning in the first place.

Another testbed is in actual rather than simulated microgravity. Caplan has also taken his research on board Novespace's specially adapted Airbus. Jokingly referred to as the 'vomit comet', this plane flies in parabolic arcs, swinging between microgravity and 2g, double that of the Earth. The low-gravity effect is maintained for under a minute, during which measurements are taken. A single flight can include up to 30 parabolas.

Caplan used 3D motion capture to track movement of the spine during the flights, and electromyography to measure muscle activity. "We were able to look at how muscles in the spine changed in their function as gravity reduced from 1g to 0.25g, which is halfway between lunar and Mars gravity."

MARS REHEARSAL

As essential an issue as it is, space medics are responsible for more than mitigating the effects of low gravity. Research and planning focus on protecting humans from all adverse conditions in the space environment, including, for example, temperature variations of –150°C to +150°C on the moon's surface.

As part of this effort, space agencies carry out 'analogue missions' on Earth that simulate space activity to the n-th degree. Bonnie Posselt, a specialist registrar in aviation and space medicine and medical officer with the Austrian Space Forum, took part in one analogue mission in the desert in Oman, a practice run for a trip to Mars. There she monitored 'analogue astronauts' as they performed tasks on rock samples and the like in their sealed spacesuits.

She assessed all the different types of risk – general medical (cuts, rashes, headaches), environmental (heat), occupational (pressure sores and musculoskeletal issues from the suit) and, of course, real-life emergencies. There was even a 20-minute communication delay to simulate the distance to Mars. "It was incredible, a really steep learning curve. The stuff I learnt there was phenomenal."

Posselt has since moved onto Wright-Patterson Air Force Base in the USA where she's now working on helmet-mounted display systems for astronauts. The next generation are likely to be stereoscopic, giving a 3D image. It's technology she can envisage being used on Earth one day. Surgeons, for example, might use headmounted displays that map an anatomical picture to the patient on the operating table, identifying organs or vessels.

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OTHER HEALTHCARE BENEFITS

A surgical display of this type is perhaps a long way away, but there are numerous examples of this beneficial 'flip side' of space age research already in use in healthcare. For example, Nasa's digital image processing techniques for enhancing pictures from the Moon have long been used in CT and MRI. Their research with ultrasound has greatly expanded its diagnostic capability – including a lung ultrasound technique that diagnoses pneumothorax with higher accuracy than a chest X-ray – as well as its use among nonexperts in remote diagnosis and telemedicine.

Satellite applications derived from space tech are starting to find a role in remote monitoring and early diagnostics, as well as facilitating shared clinical-decision making. One project recently funded by the UK Space Agency, EARTH SCAN, will create a cloud-based AI system to support doctors in identifying polyps by analysing live colonoscopy video. It uses the same

A QUESTION



OF GRAVITY

"Under gravity, the muscles around the spine have to work continuously to keep it upright so you don't collapse into a heap"





technology essential for delivering data between Earth and spacecraft up to millions of miles away.

Another Space Agency-funded project, based on technology used to study stars in distant galaxies, aims to develop a portable 3D X-ray machine to spot early-stage cancers. The hope is that patients can be scanned in GPs' surgeries, reducing the need for trips to hospital for busy X-ray and CT scanners.

And in one of the more unusual spinoffs, a hand-held probe using mass spectrometry technology originally devised to decipher the chemical make-up of comets looks set to revolutionise the search for hitherto impossible-to-find bedbugs in mattresses.

Nick Caplan sees a possible healthcare future for FRED too. "Astronauts or simulated astronauts provide an accelerated model of the ageing process. The deconditioning in space is very similar to what we see in an ageing population.

"If we can show that FRED works for them, then this is something we may be able to apply to healthcare patients."

Adam Campbell is a writer and editor in Edinburgh and regular contributor to MDDUS publications

CHECKLIST = LIVES SAVED

Surgical mortality in Scotland has fallen by 36 per cent in the last decade. What's made the difference?

ROUND 312 million surgical operations are performed each year worldwide and every time a patient goes under the knife there is an associated risk of morbidity and death. An estimated 16.8 per cent of surgical cases develop complications and 2.8 per cent die before leaving hospital, according to one study.¹

Many factors influence surgical outcomes – both technical and non-technical – but up to half of adverse events are thought to be due to provider or system-wide shortcomings. Various measures have been tried to improve surgical team performance but perhaps the best known internationally is the WHO Surgical Safety Checklist.

The checklist was first introduced in 2008 and the World Health Organization describes it as a "simple tool designed... to bring together the whole operating team (surgeons, anaesthesia providers and nurses) to perform key safety checks during vital phases of perioperative care: prior to the induction of anaesthesia, prior to skin incision and before the team leaves the operating room".

Many of the 19 items on the checklist were already routine in most hospitals, such as confirming patient identity, marking the side/site of surgery, checking allergies and the need for antibiotic prophylaxis, and undertaking postoperative instrument and swab count. The crucial element is ensuring a consistent approach to checking that all these basic safety measures are undertaken.

The checklist was introduced in Scotland in 2008 as part of The Scottish Patient Safety Programme (SPSP), which is a national initiative established to improve in-hospital mortality rates. Perioperative management, including implementation of the WHO surgical checklist, was one of four key initial work streams of the programme, which seeks to "change the healthcare culture to one that has patient safety at its forefront". Use of the checklist was nearly uniform across Scotland by the end of 2010.

"The SPSP, having the logistics and resources of a national programme, facilitated that process with support from the Royal Colleges and commitment from members of staff," says Mr Manoj Kumar, a general surgeon in Aberdeen and National Clinical Lead for the Scottish Mortality and Morbidity Review Programme. "Health boards were committed to ensure it was implemented to scale and on time."

Over the years subsequent to introduction of the checklist, Manoj and other healthcare professionals involved in its implementation could tell it was having a definite effect – and this was the genesis of a major study, the results of which have just been published in the *British Journal of Surgery*.²

"We were aware that surgical mortality rates had dropped in Scotland," says Manoj. "We were also aware that this steep drop coincided with implementation of the checklist. So it started off really as more curiosity – could the drop in mortality rates be explained by the checklist?"

REPLICATING SUCCESS

Indeed, the true success of the WHO checklist has over the years been disputed.

An initial pilot study of the checklist was conducted in eight hospitals in eight cities worldwide and yielded impressive results over a wide variety of healthcare settings, socioeconomic circumstances and diverse patient populations. Over a 12-month period, use of the checklist reduced major mobidity by more than a third, with inpatient death rates falling from 1.5 to 0.8 per cent.

But this study had a trial format with data collated prospectively. It begged the question: could this reduction be replicated in a real-world setting? Other studies in various healthcare facilities and regions looking at the influence of the checklist on outcome have yielded mixed results. This led Manoj and colleagues from Ariadne Labs, Boston and Scotland to take a closer look at surgical outcomes in hospitals across Scotland, where implementation of the checklist was mandated through a national collaborative programme to improve patient safety.

A population cohort study was undertaken looking at all admissions to acute hospitals in Scotland between 2000 and 2014. Out of 12.7 million admissions, 6.8 million had a surgical procedure, and among that cohort the mortality rate in the year 2000 was 0.76 compared to 0.46 in 2014. Introduction of the WHO checklist in 2008 was associated with a 36.6 per cent reduction in mortality. This reduction persisted when the data was controlled for urgency of admission, which was the only baseline demographic that altered during the time frame.

No such improvement was seen in the non-surgical cohort over the same time frame.

Scotland's National Clinical Director of Healthcare Quality and Strategy, Professor Jason Leitch, commented: "While there are a number of factors that have contributed to this, it is clear from the research that the introduction of the WHO Surgical Safety Checklist in 2008 has played a key role.

"This decline in mortality has been achieved through the hard work of hundreds of people involved in the project across the NHS



SOURCES

1: International Surgical Outcomes Study group. Global patient outcomes after elective surgery. Br J Anaesth. 2016 Oct 31;117(5):601-609 2: Ramsay G et al. Reducing surgical mortality in Scotland by use of the WHO Surgical Safety Checklist. BJS 2019 Jul: 106 (8): 1005-1011

"This decline in mortality has been achieved through the hard work of hundreds of people ... across the NHS in Scotland, delivered under the Scottish Patient Safety Programme alongside a number of other surgical safety measures"

in Scotland, delivered under the Scottish Patient Safety Programme alongside a number of other surgical safety measures."

"Behind every one of these statistics is a life saved, demonstrating the impact that the Scottish Patient Safety Programme has had and continues to have on delivering safe, effective and person-centred healthcare for patients. I am delighted that this work, which has the support of Scotland's Royal Colleges and surgical societies, has been recognised in this way."

Equally impressed was Dr Atul Gawande, professor at the Harvard School of Public Health and founder of Ariadne Labs, who led the introduction of the WHO Surgical Safety Checklist a decade ago. A co-author of the *BJS* article, he commented: "Scotland's health system is to be congratulated for a multi-year effort that has produced some of the largest population-wide reductions in surgical deaths ever documented."

TEAM TALK

The authors of the research acknowledge that the surgical checklist was not a stand-alone intervention, and other parameters may have contributed to the improvement. But the checklist was the only intervention within the SPSP that targeted surgical patients specifically during the interval studied.

So why was its introduction in Scotland so uniquely successful?

"Looking at the process and speaking to colleagues, not just in Scotland but also across the UK and in North America, there is one common denominator – and it's the team," says Manoj Kumar. "Good teams equate to good outcomes. That is my personal experience and that is the evidence we are seeing."

"One of the key things about the checklist is that it breaks down traditional hierarchical barriers. People are given the time to literally pause and talk to each other. In units where they appreciate the purpose of the checklist – complemented with the right training and the proper support of management – you see better team working, better communication. People are more likely to speak up when they realise something is not right or appropriate – from ODPs to scrub practitioners to surgeons and anaesthetists."

Manoj has a particular interest in the non-technical aspects of surgical safety having also studied human factors or ergonomics and collaborated with international colleagues from other professions including clinical psychologists, and safety experts from NASA and the oil and gas industry.

"The expectation that a checklist in itself will solve all your problems is a fallacy," he says. "You can't just give someone a piece of paper and expect it to work. You need to have a full implementation process. People must actually appreciate that it's more than just a tick-box exercise.

"Ultimately it boils down to culture change and you can't change culture overnight. You have to accept that; you have to show value. You have to make the whole process meaningful."

Jim Killgore is managing editor of MDDUS Insight

Dental adviser Doug Hamilton looks at some common pitfalls in cosmetic dentistry

THE COST OF PERFECTION

T IS estimated that over £1 billion is spent each year on cosmetic dentistry in the UK. Therefore, it is likely that, sooner or later, members will encounter patients who wish to have elective treatment in the hope that their smile can be enhanced.

Cosmetic treatment, if properly planned and executed, can produce significant benefits, not least in terms of the patient's self-esteem. Therefore, quite correctly, this sub-speciality is an established and highly regarded facet of dental practice. However, this particular field also presents potential difficulties which are perhaps less commonly encountered in therapeutic interventions.

Take, for example, a complaint against one of our members who had placed crowns in order to save his patient's fractured, carious incisors. The final restorations were well fitting and aesthetically pleasing. However, one of the prepared teeth subsequently became acutely painful and required endodontic treatment.

At this point the patient initiated a formal complaint. Our member was genuinely sorry that these complications had occurred but explained in his response (with reference to his excellent records) that all material risks, including the risk of pulpitis, had been discussed pre-operatively. The patient was also reminded that these crowns had been essential if the patient was to retain his front teeth. These reassurances were accepted by the patient and the matter was resolved amicably.

What if the crown provision had been elective? Perhaps the patient's incisors had been sound but unsightly. Therefore, the treatment had been driven by a desire for a 'perfect smile' rather than clinical necessity. Would our member have been more vulnerable if one of the prepared teeth became symptomatic? Again, the practitioner may have felt that he was in a strong position, assuming the elective crowns had been properly consented, well-documented and of good quality. However, it seems reasonable to suggest that, in comparison to the first scenario, the risk of conflict is heightened. In other words, patients tend to be more fractious where the work "didn't need to be done in the first place".

Therefore, we might conclude that particular risk-management measures should be considered when non-therapeutic treatment is being considered.

WALK BEFORE YOU RUN

All operators should reflect carefully on their skill set before embarking upon aesthetic cases. However, this advice is, perhaps, more applicable to recent graduates.

Many of the techniques outlined in publications look impressively straightforward but are actually highly technique sensitive. Attempting complex cases before mastering the basics can lead to all sorts of calamities, so it is critical to recognise and work within your scope of competence.

Experience also tends to enhance the practitioner's ability to assess the cases from a patient-management, as well as a clinical perspective. As we learn to listen to even the most distant warning bells, it becomes more likely that certain challenging patients and/or high-risk procedures will be politely declined. Sometimes, the disappointed patient decides to 'dentist-shop' for a more malleable practitioner. It is often younger colleagues who end up being pressurised into undertaking ill-conceived or overly ambitious treatments. Patient-led dentistry is a recipe for disaster. It is the clinician who considers which options are justifiable and presents them (along with suitable information). Then it is the turn of the properly informed patient to decide whether to give or withhold consent (not the other way round).

Although this rule is axiomatic, there are circumstances where the patient may, quite understandably, feel aggrieved when the expected treatment is refused. Special deals, for example, might seem like a commercially astute ploy. The danger is that this approach can appear to guarantee certain treatments to

patients (at a competitive price). Once the clinical assessment has been completed, it may be discovered that this is not a suitable case. Disappointment, not to say indignation, is sure to follow. Even so, it is vital that you do not take on cases that are contrary to your clinical judgment, irrespective of the patient's determination to take advantage of their discount voucher.

CLEAR INFORMATION

Following an appropriate pre-operative assessment, the operator must provide all the clinical information that a reasonable patient would require to know. Ultimately, patients should be given a treatment plan/cost estimate for their consideration and signature. However, before this plan is finalised there must be a description of the proposed treatment and of alternative management (which incorporates the ever-present options of non-intervention and delayed intervention). This explanation should be accompanied by advice regarding the material risks associated with each option.

When considering therapeutic treatment, there may well be a risk associated with both active and passive management. Returning to the earlier example where jacket crowns were needed to restore vital but compromised incisors, it seems to be



"The trick in these situations is to know when to quit. Replacing already excellent restorations is rarely helpful"

accepted wisdom that this treatment will carry about a 10-20 per cent chance of the pulp becoming moribund. A patient may withhold consent on this basis, but should do so only after being advised as to whether failure to crown may result in other problems such as the teeth eventually becoming un-restorable.

In cases involving elective treatment, however, there may be little or no risk associated with non-intervention (apart from patient disappointment). This point must be explained in understandable terms long before treatment commences.

Of course, if the patient continues to request treatment, the dentist will usually attempt to achieve the desired result, using the approach that carries the least risk. For example, in cases involving discoloured yet intact anteriors, the dentist may discount the options of crowns (or veneers) and recommend external bleaching. At first glance this non-invasive treatment is unlikely to result in any lasting harm. Therefore, one might be forgiven for truncating the standard consenting discussion.

In fact, there are often practical concerns (aside from regulatory restrictions) such as costs, peri-operative sensitivity and the non-bleaching of restorations. Patients must be aware of such material risks before treatment commences.

MANAGING EXPECTATIONS

Therefore, we have established that even the most conservative cosmetic procedure must be preceded by an appropriate consenting discussion. As stated previously, this process usually culminates in the production of a written cost estimate. In all likelihood, elective treatment will be relatively expensive and with higher bills come higher expectations. It is therefore vitally important to provide patients with an accurate idea of what is achievable. This could be done through accessible and interactive communication, combined with teaching aids such as pre- and post-operative photographs of similar cases. It's important to be realistic, regardless of the patient's enthusiasm for an enhanced smile.

The obvious problem is that judgement of what constitutes an enhanced smile can be highly subjective. Where, for example, a patient presents with an acute pulpitis, provision of pain relief is generally the mutually expected end-point. Cosmetic outcomes are less easy to define, which means that, even with the most comprehensive and transparent consenting process followed by technically excellent treatment, there will always be situations where the operator is delighted with the result but the patient is dissatisfied.

Avoiding this highly frustrating scenario is usually a product of years of patient assessment and management (plus some luck). However, even the most experienced practitioner can be caught out. Being confronted with the realisation that your patient's expectations are actually unrealisable or simply indefinable is not pleasant. The trick in these situations is to know when to quit. Replacing already excellent restorations is rarely helpful. At best it fuels the patient's unrealistic hopes. At worst it leads to fractures, symptoms and general bad news. Assuming that further interventions would not have a credible prospect of addressing the patient's unhappiness, an empathetic yet firm withdrawal from the case may prove to be the least worst option.

(BROKEN) RECORDS

Finally, remember the old adage, "if it's not in the notes, it didn't happen". Recording details of examinations, radiographs, consenting, treatment progress etc., can be tiresome and time consuming, but it is extremely important. If something goes awry, these notes can save you a lot of unnecessary stress.

Doug Hamilton is a dental adviser at MDDUS

CASE FILES

These case summaries are based on MDDUS files and are published here to highlight common pifalls and encourage proactive risk management and best practice. Details have been changed to maintain confidentiality.



NEEDLESS EXTRACTION

BACKGROUND

Mr J is 35 years old and attends his dental surgery complaining of jaw pain with difficulty opening his mouth and chewing. Dr K examines the patient and undertakes a radiograph which indicates an unerupted and impacted LL8. She diagnoses pericoronitis with infection and explains to Mr J that this is the cause of his jaw pain. An antibiotic is prescribed but Mr J is advised that the impacted wisdom tooth may need to be extracted.

À week later Mr J returns to the surgery still in pain and a treatment plan is devised to extract non-functional LL7 in order to allow removal of impacted LL8. Five days later the procedure is undertaken and LL7 is removed but Dr K is unable to extract LL8. Mr J is instructed that with LL7 extracted, LL8 should now erupt but he is advised to re-attend the practice in a month's time if the pain has not resolved.

Over the next two months Mr J experiences ongoing jaw pain and is referred to dental hospital. A diagnosis of temporomandibular joint (TMJ) disorder is made with referral for physiotherapy and pain management.

A few months later a letter of claim is

received by the practice alleging clinical negligence. It states that Dr K incorrectly attributed the patient's ongoing pain to an impacted LL8 and failed to investigate other potential causes, including TMJ disorder. It further alleges that extraction of LL8 was unwarranted under accepted clinical guidelines – and thus the removal of LL7 was unnecessary.

ANALYSIS/OUTCOME

MDDUS instructs an expert GDP to review the case. He concludes that Dr J was incorrect in attributing Mr J's jaw pain to an impacted/infected LL8. The records indicate no investigative findings to support this diagnosis – such as raised or tender lymph nodes or intra-oral signs of infection such as inflammation or exudate from the periodontal pocket distal to LL7.

There is also nothing in the records to show that Dr J investigated the patient's TMJ. The expert agrees that pericoronitis can cause trismus of the jaw but TMJ disorder will also do that. The radiograph showed LL8 to be encased in apparently healthy bone with no areas of radiolucency around the tooth indicative of pathology. The expert cites NICE guidance which states: "Surgical removal of impacted third molars should be limited to patients with evidence of pathology."

The expert also concludes that there is no evidence to show that LL7 required extraction. Removal of the tooth would have been very unlikely to facilitate eruption of LL8 in a patient of Mr J's age, nor would removal of LL7 have facilitated the extraction of LL8 given its position in the lower jaw.

The expert concludes (in regard to causation) that Mr J did suffer unnecessary discomfort with the removal of LL7 and ongoing pain before referral to dental hospital.

MDDUS lawyers negotiate a settlement with agreement of the member.

KEY POINTS

- Ensure treatment decisions reflect
- Make sure patients are fully aware of
 - all treatment options.
 - Treatment decisions should be
- justified in the patient notes.

NOISY CHILD

BACKGROUND

A 24-year-old – Ms L – attends her GP surgery to discuss alternative options for contraception. She is accompanied by her five-year-old son Max and is seen by Dr T. The GP asks the patient about her current method of contraception but discussion is constantly interrupted by Max demanding attention. Five minutes into the consultation Dr T stops talking and says to Max: "I am trying to speak with your mother". He then takes the boy by the arm over to a chair on the far side of the consultation room and tells him to "be quiet".

Ms L leaves the consultation with a prescription. A few days later the practice receives a short angry note complaining that Dr T had "manhandled" her son. The practice manager asks for advice on how best to respond.

ANALYSIS/OUTCOME

An MDDUS adviser reviews a draft letter of response. In the letter Dr T first offers an apology that his actions caused the family upset and concern. The GP explains that he often consults with patients struggling to discuss their health problems while being distracted by their children – however he acknowledges that it was not acceptable to move or touch Max without permission or explanation.

Dr T restates that his only intention was to focus on the matter being discussed so that Ms L clearly understood the treatment options. He assures Ms L that the incident has given him cause to reflect on how to manage such situations in future and adds that the matter is to be discussed by all the practice staff as the subject of a significant event analysis. The incident will also be reviewed in his annual appraisal, along with steps that he can take to improve his communication skills.

The response letter also provides contact details for the ombudsman in the event Ms L wants to have the matter reviewed.

KEY POINTS

- Never touch a patient or family member without having clear consent
- A prompt and sincere expression of regret can help prevent matters





FACT FINDING

BACKGROUND

A GP – Dr M – receives an email request from a lawyer representing a local council, enquiring as to his availability to attend an upcoming fact-finding hearing in regard to an infant patient. Dr M contacts MDDUS to ask whether providing evidence in person at such a hearing is compulsory.

ANALYSIS/OUTCOME

An MDDUS adviser replies in writing confirming that such fact-finding hearings are formal trials and advising Dr M to comply with the request. It is likely that if the GP is required to give evidence he will be cited and it is appropriate to co-operate, stating availability on the dates listed.

Dr M later contacts the adviser saying that he has been given a date to attend the hearing. The case involves a six-month old who sustained a femur fracture, and none of the adults in the household can explain the cause behind the injury. The GP had not seen the child but had spoken to the mother on a telephone triage call in regard to a "rash" on the leg. The mother later brought the child to A&E where the fracture was diagnosed. Dr M says he is keen to know what will be expected of him when giving evidence and any other advice MDDUS can offer. The MDDUS adviser writes back providing links to some guidance sheets offering generic advice on court appearances – but states that in providing evidence it is essential to be entirely honest and keep to your own field of expertise.

The adviser adds: "Where you do not know the answer to a question, it is important to state this. You are attending court to provide information to allow the judge to make a decision. You are not at risk of criticism and you should provide information in an objective factual manner."

KEY POINTS

• Fact-finding hearings are usually formal proceedings and cooperation is essential.

• Evidence should be factual and not stray beyond the experience and/or expertise of the medical witness.

SURGICAL MESH INFECTION

BACKGROUND

A 48-year-old – Ms L – attends her GP with a paraumbilical hernia present for the last two years. She is the mother of three children and is mildly obese. Lately the hernia has become more uncomfortable and yesterday she suffered a severe painful episode. The GP refers Ms L to the surgical unit at a local private hospital.

Ms L attends the surgical clinic two days later and is seen by upper GI surgeon, Mr K. On examination she is found to have an obese abdomen with a small paraumbilical hernia which is easily reducible. She reports having had some intense abdominal pain recently and Mr K suspects she has suffered an episode of incarceration. He advises surgical repair and discusses potential complications and recurrence rates.

Two weeks later the patient is admitted to hospital and signs a consent form. The risks documented include infection, as well as bruising, bleeding and potential recurrence and damage to the underlying bowel. Mr K undertakes the hernia repair using a surgical mesh in the preperitoneal space. She is reviewed the next morning and discharged home.

Two days later Ms L returns to hospital complaining of bruising and discomfort at the surgery site. She is reviewed by an emergency physician who notes swelling, a haematoma and discharge. A wound infection is diagnosed and the patient is commenced on Flucloxacillin. Two days later Mr K reviews the patient at the surgical clinic and confirms that Ms L has a post-operative wound infection. Cellulitis is noted and pus is expressed from the wound. Mr K considers the possibility of a mesh infection and arranges an ultrasound scan.

Three days later Mr K receives the US scan report which shows no abscess cavity but considerable inflammation surrounding the mesh. A CT is arranged for the next day and this confirms extensive deep inflammation but not affecting adjacent bowel loops.

The surgeon reviews Ms L in clinic the next morning and advises urgent removal of the mesh and application of vacuum dressing (VAC). He offers to admit Ms L at short notice for the procedure but she claims to have pressing work commitments and also wants a second opinion. She is prescribed further antibiotics and 10 days later undergoes a procedure to remove the mesh at a different hospital.

Mr K does not hear from the patient again until a solicitor's letter is received at the hospital requesting access to her



records. This is followed by a letter of claim alleging clinical negligence in the delayed diagnosis and treatment of Ms L's surgical wound infection.

The claim alleges that Mr K failed, within a reasonable period, to obtain the result of the ultrasound scan, arrange a CT scan and discuss the need for surgical management. Mr K is also accused of failing to provide Ms L with sufficient information to make an informed choice on the need for surgery to remove the mesh – or the potential complications of delaying the surgery for a second opinion.

The alleged consequence of these failures was an unacceptable delay of over 10 days – with associated pain and suffering – before the mesh was surgically removed and the infection fully treated.

KEY POINTS

Medical complications are a risk in any surgical procedure but are rarely a matter of clinical liability.
Good record-keeping, justifying clinical decisions, is the best defence in any legal action.

ANALYSIS/OUTCOME

MDDUS, acting on behalf of Mr K, commissions an expert opinion from a consultant colorectal surgeon who reviews the case notes. Based on his report, a letter of response is composed denying liability.

In regard to the alleged delay in obtaining an ultrasound result and follow-up CT scan, the expert points out that Ms L was informed of the US report within three days and a CT scan was arranged for the next day. Ms L was then seen by the surgeon in his clinic a day later and options for further treatment discussed. The expert says such a time frame would not be considered unreasonable.

The expert also rejects the allegation that Ms L was not given sufficient information to make an informed treatment choice. The patient notes show that Ms L was advised of the urgent need to remove the mesh but she chose to delay the procedure. A letter to Ms L's GP records the surgeon's willingness to admit the patient at short notice.

Breach of duty of care is denied, as is causation in that the treatment delay was an informed choice made by Ms L. No more is heard from the claimant and the case file is closed when the limitation period expires.

SAY NOTHING



BACKGROUND

A dental practice manager contacts the MDDUS advice line in regard to a phone call from the mother of a young patient. The mother is requesting that should the child's father phone the practice asking questions in regard to the girl's dental treatment, no information should be provided. The manager wants to know the legal position in regard to access to the child's records.

ANALYSIS/OUTCOME

An MDDUS dental adviser writes to the practice manager with advice on the matter. It is important first to ascertain from the mother if both she and the father have parental responsibility in relation to the girl's dental care. If they were married at the time of the child's birth then both have parental responsibility and information may be disclosed to one parent without the other's permission (if doing so would be in the child's best interests and would not disclose third-party or seriously harmful information). This also applies to separated or divorced parents, unless parental responsibility has been revoked by a court order.

For parents who were unmarried at the time of the birth of the child (on or after 4 May 2006), the default position would be

KEY POINTS

- Separated or divorced parents normally have equal access to a child's records depending on the detail of the custody position.
- Check for a court order that may restrict parental access.
- Parental responsibility usually falls to the mother in parents unmarried at the time of birth, unless the father is named on the birth certificate.
- Contact MDDUS if there is any
- uncertainty regarding parental access to a child's records.

the mother having parental responsibility, but the father would also have parental responsibility if named on the birth certificate.

If a child is made the subject of a care order, the local authority has legal responsibility for the child, and if parental rights have been removed or limited by a court order, then the local authority will likely have legal responsibility.

Further investigation reveals that the couple were married when the girl was born, but have since divorced. The MDDUS adviser states that, should the mother be unable to provide any valid cause restricting access by the father to the girl's dental information (i.e. receipt of an official document such as a solicitors' letter or court order), then he has the right to be provided information that is in the child's best interests to disclose.

UNEXPECTED TREATMENT

BACKGROUND

Mr U attends his dental surgery for restoration on a lower right molar. Mid-treatment the dentist – Dr L – informs the patient that an adjacent tooth also requires restoration and that it would be easier to carry out the procedure in the same session. Mr U indicates his consent to

KEY POINTS

• Ensure patients fully understand and consent to any deviation from an agreed treatment plan and this is documented in the notes.

 A sincere expression of regret can often prevent a complaint escalating further into a matter for the ombudsman, a claim or a GDC referral. carry on with the second procedure but without discussion of specific additional cost.

A few days later Dr L receives a letter of complaint from the patient. In the letter Mr U expresses his surprise that the second restoration involved "substantial additional cost" to the original treatment plan. He questions how this can justified and also asks why Dr L did not identify decay in the second tooth in his initial examination.

ANALYSIS/OUTCOME

Dr L contacts MDDUS for assistance in formulating a response. In the letter he explains how in the course of preparing the cavity in the first tooth he discovered interdental decay involving the second molar. Such decay can sometimes be difficult to diagnose with radiographs and is often best assessed with direct visual examination and tactile sensation, i.e. probing.

Preparing the cavity in the first tooth also offered improved access to restore the second tooth and this was why he suggested revising the plan mid-treatment. This meant that the fee for the second restoration would be reduced and Mr U would not need to return for a second appointment.

Dr L states that in retrospect it might have been appropriate to pause and more fully explain the options, giving Mr U time for reflection before agreeing to the revised plan – or to have advised the patient to make a separate appointment to restore the second tooth. His only motivation was convenience and reduced cost.

Mr U accepts this explanation as well as Dr L's apology in regard to his dissatisfaction with the treatment.

DILEMMA

A VALID OBJECTION?

Dr Gail Gilmartin

Medical and risk adviser at MDDUS

I am a GP in a suburban practice and recently a 22-year-old patient - Joe attended the surgery complaining of anxiety. Closer questioning revealed that Joe has long felt that he was "born in the wrong body". He has been researching gender dysphoria on the internet and has now decided that he wants to transition from male to female. I have been Joe's doctor since his childhood and we have a trusting doctor-patient relationship. The difficulty is that my faith dictates that gender is not fluid but biologically determined at birth. What are my obligations and personal rights in regard to treating this patient?

This is not an unusual scenario and the fact that Joe is able to address his concerns with his GP speaks well of their relationship. Although the GP may now experience some personal difficulty with Joe's presentation, legally and professionally he must offer the support and care required. This means putting aside personal beliefs, which may be a significant challenge, but it is not a situation where a doctor can exercise conscientious objection. The law and professional ethical guidance are clear.

If we first consider conscientious objection: there is no legal basis upon which a doctor can conscientiously object to providing care to a patient with gender dysphoria. Indeed, the law is very clear that transgender persons must not be discriminated against.

Specifically, the Equality Act 2010 protects trans patients from direct and indirect discrimination and harassment and, therefore, it is not open to a doctor to refuse to treat such a patient, even in circumstances where their personal view differs. This law places a clear obligation on the doctor to meet the patient's healthcare needs; there is no provision to object on the basis of religious or other personal beliefs.

Professionally, a doctor's overriding obligation is to their patient. Doctors have a duty to provide appropriate care and treatment in line with legal obligations and professional ethics. Once the doctor-patient relationship is established, there is a legal duty of care, which determines the standard of care a patient is entitled to in law.

If we consider the professional position, General Medical Council guidance in Good Medical Practice applies in all situations. Perhaps of particular relevance is paragraph 2 which states:

"Good doctors work in partnership with patients and respect their rights to privacy and dignity. They treat each patient as an individual. They do their best to make sure all patients receive good care and treatment that will support them to live as well as possible, whatever their illness or disability."

Also, it is essential that doctors are aware of their professional and legal obligations and paragraph 8 makes it clear that:

"You must keep your professional knowledge and skills up to date."

To address the specific questions raised, both ethically and legally, as the patient's GP you are obliged to offer them appropriate healthcare, whatever your personal beliefs.

This is further reinforced in paragraphs 54, 57 and 59 of *Good Medical Practice*:

"You must not express your personal beliefs (including political, religious and moral beliefs) to patients in ways that exploit their vulnerability or are likely to cause them distress."

"You must not refuse or delay treatment because you believe that a patient's actions or lifestyle have contributed to their condition."

"You must not unfairly discriminate

against patients or colleagues by allowing your personal views to affect your professional relationships or the treatment you provide or arrange."

In addition, the GMC offers specific guidance in its online ethical hub on *Trans Healthcare*, part of which states:

"If you feel you lack knowledge and experience about the healthcare needs of trans people you should ask for advice from an experienced gender specialist and address your training need."

One of the first statements in *Good Medical Practice* regarding the duties of a doctor is: "Make the care of your patient your first concern". This must prevail in all cases and in this particular case is also supported by explicit legislation which means that conscientious objection is not permitted.

It is understood that doctors come from a variety of backgrounds and are entitled to their personal beliefs but these cannot be placed above legal and ethical obligations which apply to the medical profession. In the situation described, Joe's medical needs should be met with respect and understanding. His GP's personal beliefs should not interfere with this and the provision of the healthcare required.

"There is no legal basis upon which a doctor can conscientiously object to providing care to a patient with gender dysphoria"





ON COURAGE: A WORK IN PROGRESS

Deborah Bowman

Professor of Bioethics, Clinical Ethics and Medical Law at St George's, University of London

HAVE recently had an experience that showed, again, it may be easy to speak about ethics in theory but demanding and even painful to bring ethics to life in real situations.

I was in a meeting of a lot of people I didn't know well but admired from afar. I was a relatively recent addition and I hoped to make a valuable contribution to the group's work. All was going well until someone made a remark that took my breath away. I looked around the table, unsure if I had heard correctly. There were some awkward glances. Others too had heard what I did and perhaps also felt uncomfortable.

l waited.

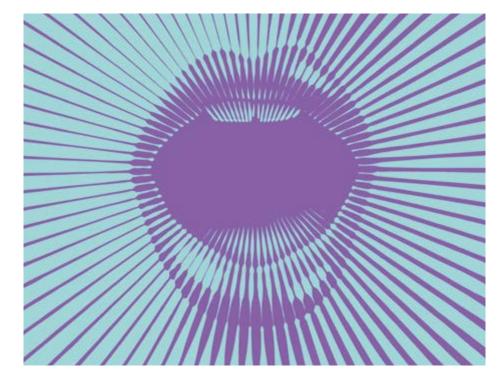
It was seconds, but felt like an age. Would someone else say something? The discussion progressed. My heart was beating faster and I could feel the tell-tale flush that creeps up my neck when I am anxious. I had a choice to make and I didn't, frankly, want to make that choice. I was frustrated, worried, disappointed and even a bit frightened. I also knew that I had to name and challenge what I had heard. But to do so felt risky. This was a new group of colleagues. How would they react? What would they think of me? Would I derail the meeting?

The elongated seconds ticked by. I didn't have time to analyse, weigh and plan. I also knew, deep down, I didn't need to analyse, weigh or plan. I needed to speak up.

By now my heart rate was at a level I usually only experience when trying to sprint the final 100 yards after a long Sunday run. My neck and face were turning an alarming blotchy pink. I swallowed hard, gripped my trembling fingers tightly under the desk and said I was surprised by what I had heard and felt that I had to challenge it. The silence was longer and louder than

ever.

The person who had made the remark asked me to expand on my concerns. Aware of all eyes on me and the sound of shuffling as people braced themselves for this unexpected interaction caused by the "new girl", I explained why I didn't think what had been said was acceptable. I was met with openness and curiosity. Without being defensive, the person queried my reasons. I was calmer now and able to describe what I thought were the problems. A moment ticked past and the person told me that



she/he had not previously considered that point, but understood and apologised.

There was no drama, hostility, criticism or difficulty. That was not due to me. It was due entirely to the response I received. After the meeting, I thanked that individual for making it possible for me both to speak up and, more importantly, to be heard with respect and generosity. Never was I more aware that it takes courage not only to 'speak up', but also to listen.

A few days later, I was part of a group participating in 'Freedom to Speak Up' training. It was sound in its content and I learned much about the people, process and steps involved in raising concerns. I left with a sound understanding of where to go and when within the organisation. What was perhaps less clear were the emotional, ethical and human influences on well-established policies, processes and procedures.

We did talk, at the beginning of the session, about our experiences of speaking up, but it was in a descriptive and sanitised way which summarised what happened. Yet, there was little sense of the sleepless nights, pounding hearts and growing anxiety that have characterised conversations I've had with colleagues and students over many years about speaking up and raising concerns.

In my research with GPs about their experiences of raising concerns and time spent with individual students and colleagues who've witnessed unacceptable behaviour or interactions, I have noticed how the emotional, the personal and the professional collide. Knowing what to do or where to go is rarely the challenge in such circumstances; having the courage to name concerns and to speak up in a maelstrom of conflicting emotions is the real difficulty. A sound process may be necessary but it is rarely sufficient.

Whether we speak up ourselves or receive the concerns of others, courage underpins these most testing of encounters. The courage to face and tame the internal script which warns us what we are about to do is risky and exposing. The courage to accept our vulnerability whilst appearing calm and clear. The courage to admit that our own behaviour may be the cause of concern for others. The courage to listen to feedback and to change. And that courage is, as I discovered in that meeting, always a work in progress.

Addenda

BOOK CHOICE

Heart – a history by Sandeep Jauhar

Oneworld Publications, paperback, £9.99, 2019 Review by Dr Greg Dollman, medical adviser, MDDUS

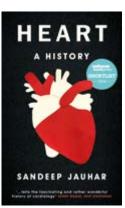
HEART is the story of what Sandeep Jauhar describes as the engine of life. The cardiologist chronicles medicine's quest to understand how the heart works (and how to fix it when it is 'broken'), while considering how we "can most wisely live with - as well as by – our hearts".

Understandably, therefore, the book is a mix of science (including fascinating facts - heparin was discovered in the brains of salamanders, and "from birth until death, [the heart] beats nearly three billion times") and philosophy ("if the heart bestows life and death, it also instigates metaphor"). And Jauhar considers the two against a backdrop of personal stories 'of the heart'.

Heart will inevitably trigger memories of years spent in medical school laboratories and lecture theatres, as well as the patients you have met over the years. Jauhar gives the backstory to eponyms (like Osler and Billroth), and shares his own clinical experiences to complement the theory.

His chapters (named to describe the heart's function in lay terms, including 'dynamo', 'pipes' and 'wires') cleverly dissect the organ into its basic parts. These provide a helpful refresher on

Crossword



the heart's anatomy and physiology.

Jauhar also charts medics' understanding of the heart as a pump, noting that, historically, cultural fallacies limited progress. Those who dared to question the working of the heart risked their reputations and even their lives for disrespecting or challenging its sanctity. And some, like George Mines, paid the ultimate

sacrifice as a result of self-experimentation. Historians believe that Mines, who discovered the electrophysiology phenomenon 're-entry', died while exploring the 'vulnerable period' for arrhythmias in a healthy heart.

Besides tracing the giant steps taken by clinicians and researchers to replicate the heart's function (the development of the heartlung machine and the defibrillator), *Heart* also considers intertwined issues like medical paternalism, autonomy and consent.

Jauhar quotes pioneering cardiac surgeon C. Walton Lillehei as saying: "You don't venture into a wilderness expecting to find a paved road". Society is indebted to so many dedicated clinicians who had the courage (and audacity) to probe further and deeper to unlock the mysteries of the heart. And Jauhar's book is a neatly paved road that makes for an enjoyable journey through this wilderness.

Bronze Age trepanned skull

THIS skull dating from 2200-2000 BC Jericho in Palestine shows three obvious trepannings (holes drilled in the skull bone). Trepanning may have been intended to release evil spirits and demons believed to cause mental illnesses, migraine and epilepsy. This individual survived the procedure as can be deduced from signs of healing in the bone.



hotograph: Science & Society

DOWN

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Open sore (5)

musicians (8)

Aerial (7)

Acid house party (4)

Sailor (informal) (3)

Supply with weapons (3)

Suspend (Parliament) (8)

Captain's quarters (9)

Give it a try (4-1-2)

Appropriate (3)

One who can turn iron into gold

_Brothers, electronic

1 2 3 1 1 4 5 6 1 1 1 1 1 1 1 1 7 1 1 1 1 1 1 1 1 7 1</

ACROSS

- 1 Impractical (11)
- 7 Rights and duties of citizens (5)
- 8 Position relative to a compass (6)10 Feelings of low self-worth and
 - Feelings of low self-worth and hopelessness (10)
- **13** When internal body part breaks tissue wall (6)
- **14** African desert (6)
- **16** Formula 1 dynasty (10)
- **19** Long-haired hound (6)
- 21 Cheerleader's tufted prop (3-3)22 Processes of military
- recruitment prior to war (11)
- 17 Multiplied by (5)18 Cross (4)
- 20 Everything (3)

See answers online at www.mddus.com/about-us/notice-board

MARJORY WARREN (1897-1960) PIONEERING BRITISH GERIATRICIAN

ERIATRICS was at one time referred to as "a second-rate specialty, looking after third-rate patients in fourth-rate facilities." But there was one physician determined to change both this perception and the equally stark reality behind it. And she succeeded.

Born in London in Queen Victoria's diamond jubilee year, Marjory Winsome Warren was the eldest of five sisters. She went on to study medicine at the Royal Free Hospital in London and qualified LRCP, MRCS in 1923. After an initial training in surgery, she became deputy medical director at the Isleworth Infirmary. In 1935, she was also put in charge of Warkworth House, the adjacent workhouse.

Warren was appalled by what she found there and began a detailed audit of those now in her care. The almost 900 residents were a very mixed group, perhaps best described as inmates rather than patients. She observed: "In the same wards were to be found senile dements, restless and noisy patients who required cot beds, incontinent patients, senile bed-ridden patients, elderly sick patients who were treatable, patients who were up and about all day, and unmarried mothers with infants".

As she noted, many were elderly with conditions she knew to be treatable, but who had been simply left to languish in the workhouse. At the time, the majority of these patients — the chronic sick as they were called— held little interest for general physicians. One commentator notes: "The medical profession as a whole was unenthusiastic about treating sick elderly people because they had multiple pathologies frequently associated with social problems that required extra time and patience, took longer to recover from illnesses, blocked beds and provided little opportunity for private practice".

Warren knew that things could be better. She held her own profession to account, deploring that it had taken "so long



awakening to its responsibility towards the chronic sick and the aged". She set about rigorously assessing the patients in her care, treating, rehabilitating and if possible discharging them home or to more suitable institutions. Thus, she created the UK's first geriatric unit.

In the years before the formation of the NHS, she wrote highly influential papers in the *BMJ* arguing for the creation of a new medical specialty — geriatric medicine. She called for the creation of such specialist-led units in district general hospitals and for nurses and medical students to be taught about the diseases of the elderly.

In her own approach to the care of the elderly she saw no overwhelming complexity. Indeed, Lord Amulree, the peer, physician and advocate of geriatric medicine, who visited her at the end of the war, noted that he was "impressed by the modest way in which she explained... how simple it all was". She concentrated on assessment and making the correct diagnosis. She also adopted a broad view, defining care plans based on the patient's specific needs, focusing on feet, eyes, ears, diet, clothing, sleep and disabilities.

In terms of rehabilitation, she was adamant that "nothing the patient could do for himself should be done for him". Her pioneering unit became a magnet for visitors from around the globe, who came to see her approach for themselves.

Warren co-founded the Medical Society for the Care of the Elderly in 1947, which would later become the British Geriatrics Society and successfully saw geriatrics become a recognised medical specialty within the NHS in the 1950s.

Warren's death was premature and tragic, at the wheel of her car as she was driving through France to attend a conference. Ironically, at the age of only 62, she died before she could ever have benefited from the specialty she helped to forge. Her peers described her as "remarkable", "formidable", "loyal" and "hospitable". But she was described by others as "rigid", "authoritarian" and "frightening". Of course, these descriptions doubtless reflect the nature of the interaction each witness shared with her. Friends as well as foes, however, were in agreement that she was "brilliant", "hard-working" and "inspiring". She has since been dubbed the "Mother of British Geriatric Medicine" and while she would doubtless have dismissed such a title, the facts of her life and her achievements do support such a claim.

Indeed, at her memorial service the month after her death, one distinguished colleague said that it was given to only a few to arrive at journey's end with their work complete and as well done as hers.

Allan Gaw is a writer and educator in Scotland

Sources

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- Obituary, BMJ Sept 17, 1960.
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- St John PD, Hogan DB, Gerontologist 2014; 54: 21-9.

Extended cover



for your practice staff

Primary Care Team Professional Advice Protection (PCT-PAP) will provide non-GP members of practice teams in England and Wales access to advice and support with complaints in respect of clinical practice indemnified by the state-backed indemnity schemes (CNSGP and GMPI). PCT-PAP offers cover for:

- practice nurses
- nurse practitioners
- advanced nurse practitioners
- paramedics
- physiotherapists
- HCAs and phlebotomists
- emergency care practitioners
- administrative staff.

MDDUS has launched two new products in England and Wales to provide practices and groups with peace of mind that non-GP staff are properly protected and have advice and support for the work that they undertake

PCT-PAP also provides regulated non-GP members of the team with access to indemnity for a defined range of non-NHS work undertaken on behalf of the practice with registered patients and NHS patients within your primary care network. Activities include travel clinics, life insurance reports, medicals for driving requirements and more.



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...And for regulated non-GP staff

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More details on these new products, including cost and how to apply are available in the *GP* - *England and Wales* section of **www.mddus.com/join** or at **tinyurl.com/y4a2cogl**