NI HEALTHCARE AWARDS
TWO DECADES OF INSPIRATION AND CELEBRATION

RARE DISEASES
A diagnostic odyssey

NEW YEAR SPECIAL
Resolving for better

2019 NI PHARMACY CONFERENCE
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GROUP B STREP
Is patient information adequate?
Uncontrolled type 2 diabetes can’t wait

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INVOKANA® (canagliflozin) 100mg & 300mg film-coated tablets. PRESCRIBING INFORMATION. Please refer to Summary of Product Characteristics (SmPC) before prescribing.

INDICATIONS: The treatment of adults with insufficiently controlled type 2 diabetes mellitus as an adjunct to diet and exercise as monotherapy when metformin is considered inappropriate due to intolerance or contraindications, or in addition to other medicinal products for the treatment of diabetes.

DOSAGE & ADMINISTRATION:

Adults: recommended starting dose: 100 mg once daily. In patients tolerating this dose and with eGFR < 60 mL/min/1.73 m², increasing titration glycemic control, dose can be increased to 300 mg (once daily).

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SPECIAL WARNINGS & PRECAUTIONS:

Hypersensitivity to active substance or any excipient. Special warnings & precautions: Note for use in type 1 diabetes: Renal impairment: eGFR < 60 mL/min/1.73 m², higher incidence of adverse reactions associated with volume depletion particularly with 300 mg dose; more events of elevated potassium; greater increases in serum creatinine and blood urea nitrogen (BUN); limit dose to 100 mg once daily and discontinue when eGFR < 45 mL/min/1.73 m². Not studied in severe renal impairment. Monitor renal function prior to initiation and at least annually. Volume depletion: caution in patients for whom a canagliflozin-induced drop in blood pressure is a risk (e.g., known cardiovascular disease, eGFR < 60 mL/min/1.73 m², anti-hypertensive therapy with history of hypotension, on diuretics or elderly). Not recommended with loop diuretics or in volume depleted patients. Monitor volume status and serum electrolytes. Haematuria: careful monitoring if already elevated. Genital mycotic infections: risk in male and female patients, particularly in those with a history of GMI. Lower limb amputation: Consider risk factors before initiating. Monitor patients with a higher risk of amputation events. Counsel on routine preventative foot care and adequate hydration. Consider discontinuing Invokana when events preceding amputation occur (e.g., lower-extremity skin ulcer, infection, osteomyelitis or gangrene). Urine laboratory assessment: glucose in urine due to mechanism of action. Lactate intolerance: do not use in patients with previous intolerance, total lactic acid deficiency or glucosuria-glactosuria malabsorption. Diabetic ketoacidosis (DKA): rare DKA cases reported, including life-threatening and typical presentation cases. Where DKA is suspected or diagnosed, discontinue Invokana immediately. Intermittent treatment in patients who are undergoing major surgical procedures or have acute serious medical illnesses. Consider risk factors for development of DKA before initiating Invokana treatment.

SIDE EFFECTS:

Common:

constipation, thirst, nausea, polyuria or pollakiuria, urinary tract infection (including pyelonephritis and prostatitis), balanitis or balanoposthitis, dyslipidaemia, haematuria increased. Uncommon (≥1/1000) but potentially serious:

anaphylactic reaction, diabetic ketoacidosis, syncope, hypertension, orthostatic hypotension, urticaria, angioedema, bone fracture, renal failure (mainly in the context of volume depletion), lower limb amputations (mainly of the toe and foot), incidence rate of 0.63 per 100 subject-years, vs 0.34 for placebo. Refer to SmPC for details and other side effects.

PREGNANCY: No human data. Not recommended.

LABORATORY RESULTS:Creatinine, haematocrit increased.

DIABETIC KETOACIDOSIS: Consider dose adjustment to 100 mg once daily. Discontinue if eGFR persistently < 45 mL/min/1.73 m². Not for use in end stage renal disease or patients on dialysis. Hepatic impairment: mild or moderate; no dose adjustment. Severe: not studied, not recommended.

CONTRAINDICATIONS: Hypersensitivity to active substance or any excipient. Special warnings & precautions: Note for use in type 1 diabetes: Renal impairment: eGFR < 60 mL/min/1.73 m², higher incidence of adverse reactions associated with volume depletion particularly with 300 mg dose; more
The churning of all things Christmas may have halted in line with December’s end, but 2019’s arrival has also brought with it a word that seems to greet upon every turn – ‘next’.

The fog of political uncertainty – ‘What’s next?’.

The pressure of self-improvement – ‘Which resolution should I work on next?’.

The reluctance to remain in one place – ‘Where should I go next?’.

Even my Netflix account urges me to click onto the ‘next programme’ before my current episode has concluded; I’m still not 100 per cent sure how Friends ends.

But succumbing to this panic is tiring, and we’re so busy focussing on the next step, that we’re not appreciating the first – which is the most important one of all.

So, in this edition of NIHR we’re taking things back a bit.

This year is of great significance to us as we reach two decades of celebrating industry excellence. As excited as are about the upcoming proceedings – it’s the first steps which we’re especially grateful for. The first steps of support for us each year, from guests, sponsors, and judges – and the first steps in the work conducted by our wonderful finalists which create the bigger picture.

Please help us mark this milestone by checking out the 20th Northern Ireland Healthcare Awards shortlist (beginning on page 27).

Meanwhile, in our New Year Special, help patients take the first step in leading a healthier lifestyle – be it through nutritional intake or drinking habits (beginning on page 38), and begin your journey of addressing the challenges in obtaining diagnosis and delivering appropriate care for rare diseases (page six).

Also in this issue, we explore the profession’s duty of candour (page four), and draw attention to the worrying finding that worldwide disability due to back pain has risen by more than 50 per cent since 1990 (page 62).

With the 2019 Northern Ireland Pharmacy Conference dashing towards us, get the lowdown on the itinerary, expert speakers, and how you can register for your free ticket (beginning on page 15).

Happy reading!
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DUTY OF CANDOUR

SORRY SEEMS TO BE THE HARDEST WORD

Apologising to a patient when something has gone wrong can sometimes be daunting, but it is an important ethical duty for healthcare professionals and is the right thing to do. Dr Michael Devlin, Head of Professional Standards at the Medical Defence Union, directs our attention to the profession’s duty of candour and how to successfully apologise.

Dr Michael Devlin

According to the General Medical Council (GMC), ‘All healthcare professionals have a duty of candour – a professional responsibility to be honest with patients when things go wrong.’

There is also a statutory duty of candour in England and Scotland that requires organisations to tell patients when things have gone wrong that meet certain, defined, thresholds of harm. A candour requirement also exists for certain NHS bodies in Wales, such as NHS hospitals, that are subject to the statutory redress arrangements.

THE REQUIREMENTS OF THE STATUTORY DUTY OF CANDOUR

At its core, a duty of candour is an obligation to tell a patient when something goes wrong and causes them harm.

For the professional, ethical duty is straightforward: it applies wherever something goes wrong and causes harm or distress to the affected patient. But the complexity arises with the statutory arrangements in working out whether the patient safety incident reaches a threshold to trigger the duty. The thresholds vary in England depending on whether the organisation is a ‘health service body’, such as an NHS hospital, or ‘any other registered person’, such as a GP practice or independent clinic. The thresholds are slightly differently worded in the Scottish legislation – it can be confusing, but the important point for doctors and other healthcare professionals to take away is always to ensure that they follow their organisation’s reporting procedures for patient safety incidents.

To illustrate how complex the threshold can be, instances which can trigger the duty of candour in a GP practice in England include:

- Pain or psychological harm which has or is likely to be present for 28 days
- An increase in the patient’s treatment
- Changes to the structure of their body
- Shortening of their life-expectancy
- Impairment of function which has lasted or is likely to last at least 28 days
- The patient requiring further treatment to prevent death or to manage an injury which would lead to one of the above noted outcomes
- Death or a permanent lessening of function, which is defined as ‘severe harm’

Bear in mind that as the treating clinician you may be asked to represent the organisation in meetings with the patient and/or their family. It is a good idea to contact your medical defence organisation for advice if you have any questions or concerns about preparing for this.

As well as being familiar with your organisation’s duty of candour procedures, including how to report patient safety incidents, you should bear in mind that your professional, ethical obligations will still apply. Consequently, if you become aware of something that went wrong which could result in harm to a patient, you should, in line with GMC guidance, give patients a full and frank explanation, tell them what you propose to do to put it right, and apologise.

If the threshold for triggering the statutory duty of candour has been met, typically the organisation must then take the following steps as soon as reasonably practicable:

- Inform the patient (or their representative) in person
- Give them a full explanation of what is known at the time, including what further enquiries will be carried out
- Offer an apology
- Keep a written record of the notification to the patient
- Provide reasonable support to the patient, e.g. an interpreter to ensure that discussions are understood, or giving emotional support
- Follow notification in person with a written note of the discussion, and keep copies of correspondence

APOLOGISING TO A PATIENT

We are used to apologising in our personal lives and it should be no different in a professional setting. A common misconception is that healthcare professionals may inadvertently admit legal liability for a patient’s harm if they apologise, but this is not the case. For example, in England and Wales, section two of the Compensation Act 2006 says, ‘An apology, offer of treatment or other redress, shall not of itself amount to an admission of negligence’. A similar provision exists in Scottish statute.

A well-placed genuine apology can often, in the experience of the Medical Defence Union, resolve matters to a patient’s satisfaction without the need for a formal complaint process to be invoked.

An apology is more likely to be accepted if it is personal to the patient, relevant to their situation (as opposed to being a generic declaration of regret), and given in a timely manner. As a general rule, an apology is likely to be better received where this is face-to-face and part of a dialogue with the patient.

If you are unsure about the wording of an apology, contact your medical defence organisation for specific advice. There is no magic formulation of words when it comes to saying sorry for what happened: the Medical Defence Union’s experience is that the successful apology is sincerely expressed in plain, unambiguous, non-technical language.
The Northern Ireland launch of an international nursing campaign has taken place, with a pledge to focus on homelessness and health inequalities throughout the region.

The Nursing Now campaign – a three-year global awareness drive run in collaboration with the International Council of Nurses and the World Health Organisation – will also draw attention to the future role of nursing and midwives, men in nursing, early intervention, and transforming education for nurses.

Northern Ireland’s Chief Nursing Officer, Professor Charlotte McArdle, welcomed the announcement, stating, ‘Today’s society faces a number of significant challenges and nurses and midwives will be a key part of the solution to those health challenges – if they are properly deployed, valued, and included in health decision-making.’

Speaking at a Public Health Nursing Conference in Mosley Mill hosted by the Department of Health and the Public Health Agency, Professor McArdle further pinpointed the prime areas of concern, explaining, ‘We must prioritise work to improve the health inequalities which continue to divide our communities in Northern Ireland. In the least deprived part of Northern Ireland, men live 6.6 years longer than their counterparts in most deprived areas. For women this figure is 4.5 years.

‘Homelessness is one of the biggest scourges of our time and I have made tackling it one of my key priorities for the Nursing Now campaign. We know a homeless person is 20-times more likely to die from drugs and 50-times more likely to have hepatitis. Statistics like that should never be acceptable.’

Pictured with Professor Charlotte McArdle, Chief Nursing Officer, and Sir Michael Marmot, Professor of Epidemiology at University College London, are staff nurses, David Ferran and Katharine Walker, who is also Miss Northern Ireland.

TOGETHER AS ONE PARENTS’ FORUM LAUNCHES

The Together as One Parents’ Forum recently launched, consisting of 11 parents, social workers, and senior managers from Safeguarding Family Support and Looked After Services within the Western Health & Social Care Trust.

The group evolved from a parenting programme, based in Shantallow Family Centre, Derry-Londonderry, which recognised that it would be massively beneficial for parents with social work involvement to share their experience to help other parents who are beginning to embark down that route. The group steadily progressed in response to the support and help which the parents received from one another.

Speaking at the launch, Nicky Fallon, Family and Children’s Manager, said, ‘Together as One Parents’ Forum continues to evolve and we are learning from one another. It is hoped that in 2019, parents and family centre staff will meet up with social work managers and teams across the Western Trust to introduce the forum and to explore ways of developing parents input into service improvement and development.’

The group meet quarterly to talk about parents’ experiences, share good practice and what is helpful, agree areas of improvement, and involve parents in the development of new ways of working.

NEW NURSING CAMPAIGN SET TO TACKLE KEY HEALTH ISSUES

The Together as One Parents’ Forum is going from strength-to-strength.
RARE DISEASES

IT’S TIME WE PAID ATTENTION TO THE ZEBRA IN THE ROOM

MEET

HANNAH*

Hannah is a funny, bubbly, and dedicated medical student based in Manchester. Alongside her studies and numerous hobbies, she lives with neutrophilic panniculitis – a very rare auto-inflammatory condition that causes large painful nodules to form under her skin. The condition is also associated with extreme weight loss, fatigue, general malaise, and joint and muscle pain.

Despite these symptoms leaving Hannah completely disabled and housebound, it took her 10 long months to reach a diagnosis. She was passed from doctor-to-doctor, with many not believing that she was experiencing the symptoms she described, and given many wrong diagnoses.

Unfortunately, because it is so rare, there is no treatment for neutrophilic panniculitis. Hannah’s condition is kept under control through a combination of immunosuppressant medication and steroids, but this can lead to severe infections.

In the four years following her diagnosis, she has been hospitalised with urinary sepsis, disseminated shingles, haemorrhagic cystitis, Influenza A, and pneumonia, to name just a few. These illnesses mean that Hannah frequently has to put her whole life on hold.

Hannah has come to know her body – and the early signs of upcoming infection – well. Yet she still comes up against doctors who are unwilling to accept her own assessments. This is understandably very frustrating: Hannah is left feeling that her doctors do not trust her despite her shortest hospital stays being when they are receptive to her knowledge.

Hannah’s experience is far from an isolated case and her story is echoed across the rare disease community. Patients commonly feel as though they have to fight the healthcare system as well as their diseases, with physical, mental, and social knock-on consequences. Rare and unusual diseases can present huge challenges to doctors, but doctors must listen closely to the patients sat opposite them if they are to ensure their best care and treatment.

*Details of this story, including the name, have been changed to protect the identity of the person at its focus.

With the rise of genomics and personalised medicine, treating people according to their specific needs is set to become more common. The impact of this shift will be no greater than in rare diseases, where 80 per cent of the 7,000 conditions are genetic, but only 400 have a licensed treatment. However, to make meaningful differences in patients’ lives, this shift must be coupled with a more co-operative outlook among frontline healthcare professionals. Libbie Read, from Findacure, explores how you can become rare-savvy and build more productive relationships with rare patients.

WHAT ARE RARE DISEASES?

Rare diseases are defined in Europe as conditions that affect fewer than one-in-2,000 patients. Chances are that you will have come across rare patients in your clinics: while individually rare, collectively these 7,000 diseases are estimated to affect one-in-17 people – or 3.5 million people in the UK. They include more common rare diseases, such as Duchenne muscular dystrophy and cystic fibrosis, down to the ultra-rare and even unique.

While rare diseases are diverse in terms of their symptoms and physical manifestations, they share challenges in obtaining diagnosis and getting access to appropriate care, support, and treatment.

THE RARE REALITY

A 2016 survey by Rare Disease UK (RDUK) found that the average rare disease patient consults with five doctors, receives three misdiagnoses, and waits four years before receiving their final diagnosis. In fact, one-in-10 patients surveyed had seen more than 10 doctors before getting a final diagnosis. Those with a positive diagnosis experience count themselves as ‘lucky.’

This so-called ‘diagnostic odyssey’ can have a huge impact on the physical and mental health of patients. RDUK reported that a worrying number of respondents had difficulties convincing friends, family members, employers, and healthcare professionals that their unusual symptoms were real. It is common for patients to be accused of being a ‘hypochondriac’ or even diagnosed with psychiatric illness. Consequently, many rare patients become socially withdrawn and isolated.

Once a diagnosis has been reached, most patients are not able to access a treatment. There are only 400 licensed medicinal products in Europe for the 7,000 rare diseases. Playing trial-and-error with off-label therapies is an option, but this depends on their doctor’s willingness to experiment with prescriptions that can have limited success.

On top of this, patients’ care is rarely co-ordinated. Rare diseases regularly affect multiple systems of the body, meaning that patients can end up consulting multiple professionals from different hospitals in different cities.

Libbie Read
Information is often not shared between health services and advice can conflict: some patients liken tracking and organising their health information to a part-time job. Travel can be burdensome too: according to RDUK, the average rare disease patient attends at least three clinics every quarter, travelling one- to-two hours for each.

Living with a rare disease is exhausting and isolating. Two-thirds of respondents said that their condition or caring responsibilities affect their ability to hold paid employment, and half said that it affects their education. Doctors and the wider scientific community have a large role to play in improving this situation, but you can’t do it alone: you must work with patients, who are by nature experts in their conditions, if you are to achieve a meaningful difference.

WORK IN PARTNERSHIP WITH PATIENTS

Credit: Findacure and Barbara Asboth Photography

Doctors can’t be expected to identify the majority of rare conditions; there are far too many to learn in an already jam-packed medical education. However, the traditional mantra, ‘When you hear the sound of hooves, think of horses, not zebras’ which is often taught at medical school is dismissive, top-down, and outdated. It can cause healthcare professionals to narrow their minds when confronted with something unusual.

Being open to the possibility of rarity – the zebras in the room – and working in co-operation with patients through diagnosis, and in accessing appropriate care and treatment, is crucial if you are to ensure the best for those in your care.

Here are some small steps you can take to help:

EXPERT PATIENTS: LISTEN AND LEARN

One of the biggest frustrations we hear from patients is that their doctors do not listen to them. Those affected by rare diseases have often conducted a high level of personal research into their conditions, and, given that they are faced with the symptoms on a daily basis, they have a lot of information that they can offer their doctor.

Our advice would be to do your research, but don’t be afraid of saying that you don’t know the answer and you’re willing to be taught. In particular:
• If you are new to the patient, believe that they have a rare disease and get curious about it. Ask them about their history, what their normal symptoms are, and how it affects their lives. This will help to build a positive and trusting relationship, but will also mean that you are ready to respond in times of relapse, deterioration, or unusual symptoms
• Research different treatment options and be flexible with the treatment plan. Listen to the patient’s preferences for treatment, be willing to try new options, and record the outcomes
• Help the patient / parent share the outcomes of your appointments with the other healthcare professionals they regularly see, and support them if they are trying to co-ordinate their appointments
• If there is a treatment that patients are not able to access for financial reasons, support their fight through compassionate use, and other access schemes

WORK WITH PATIENT GROUPS

Patient groups are organisations that support patients and families affected by a particular condition or group of conditions. Their aims and priorities are highly varied: some focus on raising awareness of rare conditions among healthcare professionals and the public, others directly support patients and families, and ensure that they get the social benefits which they are entitled to, and others drive scientific and medical research forward.

In rare conditions, patient groups are incredibly powerful entities – they build geographically dispersed communities, break down isolation, and provide patients with hope. There is a lot you can do to support their goals in your medical capacity:

• Join their medical advisory boards
• Help them write health literature
• Allow them to forward questions seeking medical advice from their online forums
• Help them develop referral pathways or medical guidelines
• Help them collect data – e.g. by inputting to a registry or natural history study
• Contribute to outgoing communication about research and clinical trials

You can also help patients that come into your clinics research which support groups are out there. If you can’t find one on the web, try Facebook and Twitter – some are very basic but are still vital sources of support.

CONTINUE YOUR PROFESSIONAL DEVELOPMENT

Some patient groups and specialist centres have developed disease-specific CPD-accredited courses or conferences that you can attend to become more rare aware. For instance, the AKU Society have developed a free e-learning module for the rare disease, alkaptonuria. You could also look at specialising your own career in a rare disease or set of rare diseases to reduce the travelling time for local patients.

CONNECT PATIENT ADVOCATES TO FINDACURE

If you know any rare patients who want to start their own patient groups, refer them to Findacure for support. Our training workshops and mentoring programmes help them grow their patient group, raise awareness of their condition, get research ready, and provide support to patients and families – all for free!

To find out more, visit www.findacure.org.uk/patient-group-training.

For more ideas about how you can become rare-savvy, you can read a selection of fantastic essays by medical students on the website and get involved with other organisations, such as Medic4RareDiseases, Rare Revolution Magazine, and Rare Disease UK.
The family of a young GAA player who died unexpectedly from a previously unknown inherited heart condition are to hold a gala ball in May to raise funds for research into the silent killer.

22-year-old Kevin King died suddenly during a game of indoor soccer with friends at Campsie outside Derry-Londonderry on 3rd November 2016. The sports-mad Eglinton man played for his local club, St Mary’s, Slaughtmanus, with his death subsequently sending shockwaves through the local GAA and wider sporting community.

After Kevin’s death his parents, John and Margaret, and brother, Martin, learned that he had arrhythmogenic right ventricular cardiomyopathy – an inherited heart condition that damages the muscle of the heart and can lead to sudden death.

On 4th May, two days before what would be Kevin’s 25th birthday, the family are set to hold the King of Hearts Gala Ball in Titanic Belfast, in which the glittering black-tie event was launched by event compere TV sports legend, Adrian Logan, and Ireland rugby star, Stephen Ferris, who will speak on the evening about his sports career. Both sports figures support the family’s campaign for more research into inherited heart conditions that claim the lives of too many young people in Northern Ireland.

Money raised from the event will go towards British Heart Foundation Northern Ireland for research into inherited heart conditions. The funds are vitally needed, with the organisation estimating that around 17,500 people across the region have a faulty gene which puts them at an unusually high risk of developing heart disease or dying suddenly at a young age. It is estimated that at least one young person (aged under 35) dies every month from an undiagnosed heart condition here.

To buy tickets for the King of Hearts Gala Ball, visit www.gifshop.bhf.org.uk/king-of-hearts-ball-ticket, or to discuss sponsorship opportunities, contact Orla Clarke at clarkeo@bhf.org.uk.

SPORTS STARS GET BEHIND GALA BALL IN MEMORY OF YOUNG GAA PLAYER

QUB GRANTED SIGNIFICANT FUNDING TO ADDRESS FERTILITY ISSUES

Queen’s University Belfast (QUB) has been awarded 6.1 million euros, in collaboration with 11 other global partner universities and institutions, to develop a test to identify harmful chemicals that affect female fertility.

The grant is part of a wider research project funded by the European research and innovation programme, Horizon 2020, to develop highly-needed test methods to pinpoint harmful chemicals, known as endocrine disruptors. The tests will be employed to address a range of health issues affecting humans, animals, and the environment.

Endocrine disruptors are chemicals that can interfere with hormones and are found in everyday products, such as plastics, air fresheners, and cosmetics. Without dedicated tests to assess endocrine disruptor properties, it’s difficult to gauge the damage which these chemicals can impose.

Dr Lisa Connolly, from the Institute for Global Food Security at QUB, co-author on the study, explained, ‘There is surprisingly limited knowledge on this issue. We will investigate how exposure to endocrine disruptors during different hormone-sensitive phases in a woman’s life, such as the foetal, puberty, and adult stages, can ultimately affect her fertility.’
A Public Health England-led study recently revealed that up to one-in-five antibiotics were prescribed inappropriately in the UK – with coughs, sore throats, and ear infections chief among the conditions wrongly treated. That could point to prescribers either not caring about antibiotic resistance, or at best being ignorant of a problem that already costs 700,000 lives per year globally.

The close relationship with GPs and other prescribers, however, has revealed often disturbing feedback around patients’ insistence on receiving antibiotics. This has resulted in threats of reporting family doctors to the General Medical Council, a dire online review of the practice, and even physical violence, if patients are denied the drugs.

We deplore this behaviour but recognise it is a direct consequence of a cultural relationship with antibiotics that insists that they are a cure-all. And when people are refused that silver bullet, this is construed as bad practice, or even a lack of compassion.

The Antibiotic Age

ANTRUK has recently been working with Sarah Whitlow, the granddaughter of Sir Alexander Fleming, whose discovery of penicillin began the antibiotic age. A practice nurse, Sarah believes that over the course of her long career, people have begun to simply not countenance being ill any more (and are pressured back to work by unscrupulous bosses), and therefore want an effective panacea, there and then – even if that antibiotic won’t cure their viral infection and may prove dangerous to their health going forward.

Sir Alexander Fleming actually predicted as early as 1945 that we faced returning to a pre-antibiotic age unless we developed new medications to build upon his discovery. Apocalyptic warnings that routine hospital operations could be cancelled for fear of infection and that we could return to an age where human beings could die of something as simple as a scratch, seem to have done little or nothing to inspire governments to incentivise and generally take the situation more seriously.

Antibiotic Resistance

Resistance to current antibiotics is rapidly becoming one of the world’s biggest healthcare threats. What steps can be taken to help curtail this crisis? Professor Colin Garner, founder and Chief Executive of Antibiotic Research UK, highlights the importance of the sector taking ownership of an issue that will directly affect not just our generation, but those to come too.
ANTIBIOTIC RESISTANCE

A FIGHTING CHANCE
Set against this background, ANTRUK is the small but growing charity fighting the world’s biggest health problem. And it needs the assistance of clinicians and pharmacists to not only improve prescribing habits, but to be flag-wavers in a bid to change behaviours in the public and put pressure on decision-makers.

Health workers are our natural allies in this battle. Every day they display a vested interest in what is best for their patient. Unlike other medications, antibiotics are dispensed in short-term courses, and yet the profitable drugs that big pharma do develop to treat everything from heart disease to cancer (sometimes through charitable donations) would be rendered useless to the patient if they then picked up a hospital-acquired superbug such as MRSA.

ANTRUK needs you to stand shoulder-to-shoulder with us to persuade drugs companies to invest not just in headline-grabbing innovative solutions, but the development process that will put effective antibiotic treatments into the pharmacy. Big pharma cries out that it needs incentives to make that transition. Again health workers have a massively strong voice; and were every one of you to write to or lobby your MP on this matter, politicians would surely sit up and take note. More investment might also be put into training around antibiotic prescribing and support for prescribers under pressure from the public.

OTHER PIECES OF THE PUZZLE
The farming industry, and indeed those practicing animal healthcare, can also play a pivotal part. Livestock is still being fed antibiotics, not only to cure illness, but to protect them from infections in intensive production facilities. While some way behind countries such as Sweden, British farming has taken a more responsible attitude towards antibiotic usage; but that isn’t the case in other countries we trade with (and more meat could be imported from less regulated countries such as America following Brexit). Antibiotics are therefore in our food chain and their residue is increasingly being discovered in our water courses.

Britain, seen a few years ago under the David Cameron government as a leader in combating antibiotic resistance, doesn’t even have a record of how many patients die or are treated for superbugs. Together we must make such a register a reality. We can’t tackle the problem unless we know how big it is!

Education is vital and awareness can begin in what is still a hub of the community; the pharmacy and the surgery. Materials from Public Health England’s Keep Antibiotics Working campaign have been distributed to NHS outlets throughout the country and in many cases are displayed prominently for patients to see. But in an online age where antibiotics can be ordered as simply as a takeaway pizza, the dangers of misuse and abuse of antibiotics needs to be hammered home (a recent American survey of parents showed that around half were giving their children their own leftover antibiotics – is this also happening here?).

BUILDING KNOWLEDGE THROUGH EDUCATION
Education can be done during the course of appointments, but also via local events and health education sessions. For example, NHS out-of-hours service BARDOC (covering Bolton, Bury and Rochdale) organised a Great British Tea Party fundraising event for ANTRUK at Bury’s premiere healthcare centre. They raised over £500 for our charity, but also put the organisation in even better touch with its community and allowed BARDOC to share messages around antibiotic resistance.

ANTRUK has just appointed its first patient support officer. While organisations such as Macmillan issue tremendous support to those living with conditions such as cancer, where is the information and arm around the shoulder when a patient contracts C. diff or MRSA? Your input into this new post and its proposed network is vital.

At the heart of last year’s winter crisis, ANTRUK ran a campaign on ensuring hospital cleanliness, which illustrates perfectly how we can work together effectively with health professionals. We have been genuinely impressed by the efforts of infection control teams in improving cleanliness in wards and departments and results have been tangible since the dark days of the early 2000s and outbreaks of MRSA. But over-occupancy and the close proximity of patients – plus scant resources, especially in staffing – made us call on the public to become vigilant visitors and report shoddy cleanliness to hospital authorities. We were so encouraged that staff in primary and acute care, plus pharmacies, responded to this campaign positively, recognising it not as an attack, but as a concerted effort to protect health and beat the superbugs.

STEPS IN THE RIGHT DIRECTION
As with the environment, individuals can feel remote from being able to solve the problem of antibiotic resistance. For some, it seems like miles away from the every day. But their small changes allied to seriousness around the problem from the pharmaceutical industry, health charities, and food producers might just tip the balance. That united front would be even more successful if the glue that kept it together was healthcare professionals and pharmacists, championing the cause at local and national level and leading by example by prescribing wisely.

The problem of antibiotic resistance is terrifyingly real, but as Sir Alexander Fleming famously said, ‘There’s never been a better time for humanity, despite the hydrogen bomb.’

And, with healthcarers in the fold, I am optimistic and firmly believe that we can beat the superbugs and preserve health for future generations.

ABOUT THE AUTHOR
Professor Colin Garner is the founder and Chief Executive of ANTRUK, the world’s first charity to fight bacterial antibiotic-resistant infections. ANTRUK aims to raise sufficient funds over the next few years to bring at least one new antibiotic therapy to market by the early 2020s, as well as expand its patient support and education activities.

For more information about ANTRUK’s work, and to donate to the charity’s cause, visit www.antibioticresearch.org.uk.
In 2015, after several years working with a stammering and decided to focus on developing skills in this specialist area. During this time, I developed a keen interest in children with moderate learning difficulties. Trust (SET), which involved working with community clinics and in a school closer to home for a post in the South Eastern community clinics in the Western Trust, I moved Northern Ireland to start my first job as a SLT. After working with children across four University. I graduated in 2006, moving back to and Language Therapy, at Leeds Metropolitan a BSc. in Clinical Language Sciences, Speech communication difficulties. My career began in 2003, when I studied for language delay / disorder, head injury, learning difficulties, dysphagia, degenerative diseases, speech sound delay / disorder, and social communication difficulties.

If you ask people what the post of a Speech and Language Therapist features, most will associate it with working with people who stammer; people who have had a stroke; and that they help people to talk ‘properly’. In reality, the role is much more extensive. In this edition of NIHR, Speech and Language Therapist, Laura Knott, allows us to tap into the transformative impact of her day-to-day work life, and how she’s adopting the platform to improve the lives of so many vulnerable people.

Laura Knott
Speech and language therapists (SLTs) are part of the allied health professional (AHP) family and are vital team members, working with children and adults who have voice disorders, stammering, language delay / disorder, head injury, learning difficulties, dysphagia, degenerative diseases, speech sound delay / disorder, and social communication difficulties.

In 2015, after several years working with a paediatric stammering caseload and completing an MSc. programme in Language and Communication Impairment in Children, I became responsible for managing the children’s stammering caseload across the SET. In this role, I developed the care pathway for managing children under eight years old who stammer, and was the first AHIP to win a non-acute award for this work. I’m enthusiastic about evidence-based practice and quality and am involved in running an annual Quality Evidence Day for SLTs within the SET. I’m also a Northern Ireland Research Champion for the Royal College of Speech and Language Therapists.

In 2016 I was appointed to a position in The Michael Palin Centre for Stammering in London, which is recognised as the International Centre of Excellence for Stammering. This dream role included carrying out specialist assessments, making diagnoses, and managing children, adolescents, and young adults who stammer, as well as offering second opinions to other SLTs. In 2017 I moved back to Northern Ireland to take up my current position as the Clinical and Service Lead SLT for the Paediatric and Adult Stammering Service. I also work one day a week in Hydebank Wood College, assessing the prevalence of speech, language, and communication (SLC) difficulties within the male and female population, and developing the SLT service model within the prison health setting.

Previously in Northern Ireland, SLT input into young offender facilities and prisons was an ad-hoc service for particular clients with high risk needs, such as swallowing difficulties. Research demonstrates that there is a high prevalence of communication difficulties within these populations, with approximately 60 per cent of young offenders, and 80 per cent of adults in prisons having SLC needs. Difficulties like this can impact upon an individual’s ability to access education and employment and can influence their behaviour and mental health.

Research demonstrates the benefits of SLT input as we can help build protective factors against reoffending, such as supporting individuals to access talking therapies; help to build relationships; and help to make information, such as licence agreements, accessible.

I work Monday-to-Friday and my working day starts at 8am when I respond to emails from colleagues and check the waiting lists.

On stammering service days my first client / family arrives at 8.30am, and I spend the day assessing, diagnosing, and managing both children and adults who stammer, as well as supervising, training, and giving second opinions to other SLTs. As a member of the Stammering Clinical Excellence Network and as a service lead, I contribute to regional decisions like the development of regional care pathways and training programmes.

Therapy for stammering is bespoke for clients / families and is always evidence-based. Intervention for very young children focuses on parent-child interaction, family strategies, and confidence-building; while input for older children and adults may include working on the client’s communication skills (e.g. eye contact), thoughts and feelings (to help clients be more open about their stammering and feel less sensitive about it), and techniques to help clients be able to manage moments of stammering more easily. The focus of therapy is never to be ‘fluent’. Involving service users in decisions about the service is extremely important to me, and we recently changed the name of the service from The Specialist Fluency Clinic, to The Stammering Service.

I am passionate about raising awareness about stammering, and the benefits of SLTs working within prison health and youth justice, and frequently talk about this.
With the relaxed ease of recalling our own phone number or relaying a well-rehearsed fact, the majority of us can conjure up the name of at least one person in our life who has been diagnosed with asthma. Rather than a reflection of our incessant research – this is simply a sign of how common the chronic inflammatory airway disease is in our present day.

In fact, as reported by the British Lung Foundation, eight million people – over 12 per cent of the population – have been diagnosed with asthma. This means that more people have had an asthma diagnosis than have been diagnosed with all other lung diseases combined.

In order to meet its prominence, healthcare professionals have expanded their knowledge base – particularly when it comes to diagnosis, and the variability of individual patients and their needs. However, we must be careful not to submit to the perception that we have all the information required.

For example, the asthma-related statistics don’t necessarily portray reality; demonstrating just how complex matters of diagnosis are. Children diagnosed with asthma can grow out of it, with Asthma UK stating that around 5.4 million people receive treatment for the disease. As such, there’s ongoing concern that asthma may be considerably over-diagnosed.

**AS CLEAR AS DAY?**

It’s also important to bear in mind that influential factors for diagnosis may be beyond the realms of the patient’s current wellbeing or medical background.

Research has hurtled towards the possibility that the human body clock significantly impacts on sample results used to diagnose and treat asthma when taken at different times of the day – therefore having implications as to how the respiratory condition is diagnosed and treated in the future.

Dr Hannah Durrington, Senior Clinical Lecturer at The University of Manchester, who led the research, funded by Asthma UK, explained that the test results from an asthma patient taken in the morning differ from those taken from the same patient in the afternoon. The process entailed analysing blood, in addition to the mucus coughed up from the lungs, and the breath of 10 moderately severe asthmatics, and 10 healthy volunteers at different times of the day.

Indicative of how change can be activated, the asthmatic volunteers displayed greater narrowing of their airways in the early hours of the morning than in the afternoon, and this corresponded with a change in inflammatory cells – or eosinophils, measured in their sputum. Sputum eosinophil levels can be used to guide treatment in severe asthma patients.

The research also revealed that sputum eosinophil levels can vary considerably between the morning and afternoon; they were higher in the morning, and lower in the afternoon.

Dr Samantha Walker, Director of Research and Policy at Asthma UK, commented on the new consideration for asthma diagnosis, saying, ‘People’s body clocks are incredibly powerful. This research, which we are proud to help fund, shows that for the 5.4 million people in the UK who have asthma, the results of an asthma test could differ depending on the time of day the test took place. While this research is at a very early stage, it could have a significant impact on when people with asthma are tested at some stage in the future. ‘We look forward to seeing the results of the next stage of the team’s research in this area.’

**AGAINST THE CLOCK**

The complicated relationship between asthma and time can be wielded for the welfare of patients – in that if the body clock controls the inflammatory response, we may be able to target the conditions at certain times of the day to have the most benefit. New findings – led by researchers at Dr Annie Curtis’ Lab at the Royal College of Surgeons in Ireland in partnership with Professor Luke O’Neill’s Lab at Trinity College Dublin – may also shed light on why individuals who experience body clock disruption, such as shift workers, are more susceptible to inflammatory conditions.

Dr Jamie Early, first author on the study, explained, ‘We have made a number of discoveries into the impact of the body clock in macrophages on inflammatory diseases, such as asthma and Multiple Sclerosis. However, the underlying molecular mechanisms by which the body clock precisely controls the inflammatory response were still unclear. Our study shows that the central clock protein, BMAL1, regulates levels of the antioxidant response protein NRF2 to control a key inflammatory molecule called IL-1β from macrophages.’
The first and only ICS/LABA fixed-dose combination (FDC) delivered in a breath-actuated aerosol inhaler.³

References:

Presentation
Pressurised inhalation suspension, in a breath-actuated pressurised aerosol inhaler.

Indications
Regular treatment of asthma where the use of a combination product (inhaled corticosteroid [ICS] and long-acting β2-agonist [LABA]) is appropriate: (i) for patients not adequately controlled with ICS and “as required” inhaled short-acting β2-agonist (SABA) for patients already adequately controlled on both an ICS and a LABA. For adults and adolescents aged 12 years and above. Dosage and administration For inhalation use. Patients should be shown how to use the inhaler correctly by a healthcare professional. Patients should be given the strength of Flutiform k-haler containing the appropriate fluticasone propionate dose for their disease severity (note that Flutiform k-haler 50 µg/5 µg per actuation is not appropriate in patients with severe asthma). The appropriate strength should be taken as two inhalations, twice daily (normally morning and evening) and used every day, even when asymptomatic. Flutiform k-haler is not recommended in children under 12 years. Prescriber should be aware that in asthmatics, fluticasone propionate is as effective as other inhaled steroids when administered at approximately half the total daily microgram dose. Patients should be assessed regularly and once asthma is controlled, treatment should be reviewed and stepped down to the lowest effective dose, or on an ICS alone. ICs alone are first line treatment for most patients. Flutiform k-haler is not intended for initial treatment of mild asthma. For patients with severe asthma the ICS therapy should be established before prescribing a fixed-dose combination product. Patients on Flutiform k-haler must not use an additional LABA. An inhaled SABA should be taken for immediate relief of asthma symptoms arising between doses. Patients should be advised to contact their prescriber when Flutiform k-haler dose counter is getting near zero. Contraindications
Hypersensitivity to the active substances or to any of the excipients. Precautions and warnings Flutiform k-haler should not be used as the first asthma treatment, to treat acute asthma symptoms or for prophylaxis of exercise-induced asthma. It should not be initiated during an exacerbation, during significantly worsening or acutely deteriorating asthma, and should not be stopped abruptly. If a patient experiences serious asthma-related adverse events or exacerbations, they should continue treatment and seek medical advice. Patients should be reviewed as soon as possible if there is any indication of deteriorating asthma control. In case of sudden and progressive deterioration, seek urgent medical assessment. Caution in patients with: pulmonary tuberculosis; quiescent tuberculosis; active tuberculosis; quiescent tuberculosis; active tuberculosis. In case of sudden and progressive deterioration, seek urgent medical assessment. Caution in patients with: pulmonary tuberculosis; quiescent tuberculosis; active tuberculosis; quiescent tuberculosis; active tuberculosis. In case of sudden and progressive deterioration, seek urgent medical assessment. Caution in patients with: pulmonary tuberculosis; quiescent tuberculosis; active tuberculosis; quiescent tuberculosis; active tuberculosis. In case of sudden and progressive deterioration, seek urgent medical assessment. Caution in patients with: pulmonary tuberculosis; quiescent tuberculosis; active tuberculosis; quiescent tuberculosis; active tuberculosis. In case of sudden and progressive deterioration, seek urgent medical assessment. Caution in patients with: pulmonary tuberculosis; quiescent tuberculosis; active tuberculosis; quiescent tuberculosis; active tuberculosis. In case of sudden and progressive deterioration, seek urgent medical assessment. Caution in patients with: pulmonary tuberculosis; quiescent tuberculosis; active tuberculosis; quiescent tuberculosis; active tuberculosis. In case of sudden and progressive deterioration, seek urgent medical assessment. Caution in patients with: pulmonary tuberculosis; quiescent tuberculosis; active tuberculosis; quiescent tuberculosis; active tuberculosis. In case of sudden and progressive deterioration, seek urgent medical assessment. Caution in patients with: pulmonary tuberculosis; quiescent tuberculosis; active tuberculosis; quiescent tuberculosis; active tuberculosis.

Adverse events
Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Napp Pharmaceuticals Limited on 01223 424444.
BY THE LOOK OF THINGS

The world of radiography across the region has amassed a multitude of changes over the last 40-plus years; with the altering role of radiographers in ultrasound being particularly notable. Reflecting and envisaging what’s potentially to come, in The Society of Radiographers and College of Radiographers’ first column of 2019, Josephine O’Connor, Principle Lead Sonographer, Southern Health & Social Care Trust, assesses advanced practice in ultrasound across Northern Ireland: from then until now.

With significant unfilled radiologist posts, and increased referrals for an increasingly diverse range of imaging, and huge reporting backlogs, it only makes sense to utilise the highly-trained workforce within radiography to address some of these issues.

In 2017 the term ‘advanced clinical practice’ was defined by Health Education England, and a framework was developed to standardise this level, and that of consultant level practice, across all non-medical professions.

This model of practice is particularly applicable within the extended field of ultrasound. Ultrasound scans are performed in real-time – what’s seen on the screen is only seen by the person performing the scan, and for that reason the sonographer is the only person who can accurately report what the scan demonstrated.

The quality of the scan and report delivered must be of the same agreed ‘gold standard’, irrespective of the professional background of the reporting practitioner.

Radiographer / sonographers (the role is still not registered or protected despite a lengthy campaign) have moved from a supervised and observational role to an independent advanced practice role, with consultant positions beginning to be appointed in many fields.

Throughout Northern Ireland, sonographers have extended their scope of practice to include independent reporting in a range of specialties. This has been achieved with increased training and mentorship to extend knowledge and skills.

In most trusts approximately 70 per cent of all scans performed in radiology departments are performed and reported directly by the sonographer who completed the scan.

MEASURES FOR ACHIEVING SUCCESS

To make an advanced practice sonographer-led service a safe and effective model, a robust governance programme is essential, involving up-to-date policies, audit, research, quality assurance, supervision, and, most importantly, the support and mentorship of our radiologist colleagues.

One example of sonography advanced practice leading in the transformational service delivery programme was the recent change in practice in antenatal scanning. In January 2017 a new Regional Obstetric Imaging Group was set up to standardise the provision of anomaly scanning in Northern Ireland, to improve detection rates, and to standardise referral protocols for mothers who have an abnormality suspected at their 20-week normality scan.

This involved taking on the roles of breaking the news to the parents and making an onward referral to the regional foetal medicine and foetal cardiac clinics, moving from a consultant obstetrician-led service to a sonographer-led service.

Additional expert training in foetal heart scanning and a dedicated programme of breaking bad news training was provided for all sonographers in the region. Regional protocols were agreed between the obstetricians and sonography departments, both in the local trusts and the foetal medicine and cardiology departments in RMJHT.

Due to this work, Northern Ireland foetal anomaly sonographers were able to take on this much-changed role with confidence in their ability to deal with all the challenging situations faced in foetal anomaly scanning. 

This change to practice has seen a more patient-centred approach and provided a better quality of service delivery to the patient at this very difficult time.

Advanced practitioner sonographers have improved the service delivery in many specialties. For example, waiting lists for routine sonographer ultrasound examinations have been reduced dramatically from, at one time, of over a year, to the current level where sonographer scans in most trusts are being performed within six-to-14 weeks. There is still room for improvement within that and we are working hard to achieve better turnaround times.

MAKING THE NEXT MOVE

The next big challenge is in the field of musculoskeletal scanning as the demand for this service across the province far exceeds the ability of our radiologist colleagues to deliver and is increasing all the time. Many departments are working on plans to support sonographers to train in this speciality, to improve waiting times in this area also, but as in other areas this will only be implemented when a robust system is in place.

In Northern Ireland the Department of Health needs to implement consultant sonography roles as they have in the rest of the UK. This will not only ensure career progression opportunities for sonographers, but also greatly enhance service delivery and access for patients to ultrasound services.
NORTHERN IRELAND PHARMACY CONFERENCE 2019

IN PARTNERSHIP WITH THE

Moving from Supply to Services
Managing the Risks, Embracing the Opportunities

THURSDAY 28TH FEBRUARY 2019
EUROPA HOTEL, BELFAST

Sanofi have sponsored this meeting and have had no input into the agenda, their sponsorship is going toward to the venue and catering costs only.
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<thead>
<tr>
<th>Time</th>
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<tr>
<td>9.00am</td>
<td>Registration</td>
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<td>9.45am</td>
<td>Welcome (and v-Wall explanation)</td>
<td>Claire Ward</td>
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<td>The Pharmacists’ Defence Association (PDA)</td>
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<td>10.00am</td>
<td><strong>What’s new in medicines optimisation and innovation?</strong></td>
<td>Professor Michael Scott</td>
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<td>Overview of the work of MOIC to date and plans for future developments. Where does community pharmacy fit in?</td>
<td>Director, The Medicines Optimisation Innovation Centre (MOIC)</td>
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<td>10.30am</td>
<td><strong>Integrating pharmaceutical care across all sectors of pharmacy</strong></td>
<td>Mark Koziol</td>
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<td>Integration and intelligent commissioning for better patient outcomes.</td>
<td>The Pharmacists’ Defence Association (PDA)</td>
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<td><strong>Changing the perceptions of the public</strong></td>
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<td>Informing the public about the impact of medicines</td>
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<td>11.10am</td>
<td><strong>Future developments for pharmacy</strong></td>
<td>Cathy Harrison</td>
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<td>Acting CPhO view on future healthcare provision via community pharmacies</td>
<td>Acting Chief Pharmaceutical Officer, Department of Health</td>
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<td>Coffee (and v-Wall reminder)</td>
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<td>12.00pm</td>
<td><strong>Transforming community pharmacy</strong></td>
<td>Dr Terry Maguire</td>
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<td>Paying attention to Public Health and self-care agendas</td>
<td>Pharmacy Proprietor</td>
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<td>12.30pm</td>
<td><strong>Innovating the pharmacy offering</strong></td>
<td>Eoghan O'Brien</td>
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<td>An example of innovative pharmacy practice opportunities</td>
<td>Pharmacy Proprietor</td>
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<td>1.00pm</td>
<td>Lunch</td>
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<td><strong>Optimising risk reduction - learning from the airline industry</strong></td>
<td>Niall Downey FRCSI</td>
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<td>How might airline industry approaches benefit risk reduction in the NHS?</td>
<td>Doctor and Airline Pilot</td>
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<td>2.15pm</td>
<td><strong>Adding value through transformation</strong></td>
<td>Dr Mark Timoney</td>
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<td>Seeing it from the other side</td>
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<td>3.00pm</td>
<td><strong>Panel discussion</strong></td>
<td>Professor Michael Scott</td>
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<td>How do we integrate community pharmacy services into the wider healthcare system?</td>
<td>Cathy Harrison, Dr Terry Maguire, Mark Koziol</td>
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<td>3.30pm</td>
<td><strong>Summary and closing remarks</strong></td>
<td>Claire Ward</td>
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NORTHERN IRELAND PHARMACY CONFERENCE 2019

Moving from Supply to Services
Managing the Risks, Embracing the Opportunities

SPEAKERS

In partnership with the
Dr Terry Maguire, Proprietor, Maguire Pharmacy, Falls Road, Belfast
Dr Terry Maguire is recognised as a pioneer in the development of pharmacy services in the UK and beyond.

Mark Koziol, Chair, The Pharmacists’ Defence Association (PDA)
Mark Koziol established The PDA in 2003. An Aston graduate qualifying as a pharmacist in 1984, Mark established PPLS a locum agency which prior to its sale in 2003 operated in eight countries. Mark was a founder of the Young Pharmacists’ Group in 1985. Elected to the RPSGB Council in 1997, his close proximity to the ‘peppermint water’ case prompted him to stand down and establish The PDA.

Niall Downey FRCSI, Doctor and Airline Pilot
Niall Downey qualified as a doctor working in cardiac surgery and subsequently as an airline pilot. He formed Frameworkhealth Ltd in 2011, a company providing aviation safety training modified specifically for healthcare.

Dr Mark Timoney, Pharmacy Proprietor
Dr Timoney was formerly the Chief Pharmaceutical Officer for the Department of Health in Northern Ireland. After spending a number of years working within policy he has recently become a pharmacy contractor and will share the lessons he plans to utilise within his new role.

Eoghan O’Brien, Director and Superintendent Pharmacist of Bannside Pharmacy Ltd
Following the completion of a Bsc in Pharmacy at Queen’s University Belfast, Eoghan spent several years practicing as a locum pharmacist in Northern Ireland and England. In addition to his pharmacist post, Eoghan is a casual lecturer at the Ulster University, School of Pharmacy for Year 3 and Year 4 Pharmacy undergraduate students on Enhanced Services and Complementary and Alternative Medicines.

Professor Michael Scott, Director, The Medicines Optimisation Innovation Centre (MOIC)
The MOIC is a new regional innovation centre, which aims to ensure better health outcomes for the population through the consistent delivery of best practice relating to the use of medicines.

Cathy Harrison, Acting Chief Pharmaceutical Officer, Department of Health
Cathy and her team are responsible for providing specialist advice on medicines and pharmaceutical issues to the health service and for the development of policy relating to medicines optimisation and pharmacy.
Internationally, the study of healthcare systems has become increasingly common. Annually, the World Health Organisation alone compiles data on dozens of healthcare metrics – from life-expectancy, to financial fairness, to overall health expenditure. At a glance, cross-country comparisons between nearly 200 nations can be made.

Nevertheless, lost among the decimal points and the soccer-style league tables are the answers to the most fundamental questions:

- Why do we collect healthcare system data?
- What, if anything, can we do with the results?
- Are there improvements being made and better patient outcomes as a result?

Despite the many differences in the provision of healthcare globally, overall some stark realities can’t be escaped. In 2018, the worldwide demand for healthcare services continued to rise. At current growth rates, experts predict that by 2050 many countries will spend more than 20 per cent of gross domestic product in this sector.

When we speak of such increased demands on healthcare systems, what we really mean is an increased call for scarce resources. Rarely do the demands on healthcare systems shift from short-term, transactional goals (greater investment, faster access to new therapies) to more long-term issues of structure (quality, innovation, efficiency). The bottleneck, of course, is that the primary function of all healthcare systems – from single organisations to entire nations – is to meet the day-to-day needs of patients. These needs are increasing but the resources to meet the needs are decreasing in many cases. If, at the same time, a healthcare system wishes to root out inefficiencies and operate according to best practice, it needs to doggedly comb its past in search of lessons for its future. In short, a healthcare system needs to learn.

The concept of a Learning Healthcare System, or more broadly, a Learning Health System (LHS), is itself not new. First advanced in academic circles by the US Institute of Medicine in 2007, LHSs have since gained global traction. The rapid evolution of the LHS concept has occurred against the backdrop of a decade where we’ve witnessed an explosion in health-related data. After all, information (be it biomedical or otherwise), is a central tenet in the LHS philosophy. Through a series of loops (commonly termed ‘learning cycles’), information gathered on a health-related issue can be transformed into improvements on current practice.

By definition, LHSs have been described as ‘sociotechnical systems for continuous improvement and innovation’ that result in ‘higher quality, safer, and more efficient care’. In essence though, any health system (at any scale) could become a LHS, so long as it made a commitment to routinely study and improve itself through the model described. That said, several key properties distinguish LHSs from their more conventional counterparts:

1. The characteristics and experience of every participant are available to learn from (D2K)
2. Best practice knowledge is immediately available to support decisions (K2P)
3. Improvement of the system is continuous through ongoing study
4. Infrastructure enables improvement to happen routinely and with economy of scale
5. All the above is part of the culture

A key cornerstone of the LHS philosophy is the availability of a common infrastructure. Without one, each learning cycle requires its own technology, policies, staffing, and analytics. In a LHS, however, these building block services are instead shared across learning cycles. As a result, a LHS can function at a fraction of the overall cost, while still addressing a variety of unique health problems. The multitude of other benefits LHSs offer only become apparent when we consider one of these issues in more detail.

The world’s first medical school academic department dedicated to the Learning Health Sciences department was created at the University of Michigan in America.
Professor Charles Friedman, the Chair of the Department of Learning Health Sciences, and Editor-in-Chief of the Learning Health Systems Journal, believes that the principles of the LHS approach can be applied to accelerate reduction of health problems such as medication errors.

"If we continue to rely on journal articles as the means of dissemination, there will continue to be a 10, 15, 17-year latency before learning makes its way into practice. We need to find a way to interpret findings and codify knowledge. Automated systems could codify knowledge with machine executable guidelines and representations of information. These are potential methods that could be used to translate knowledge back into the efficent aspect of the cycle." (1)

According to the European Medicines Agency, medication errors (preventable events that may lead to inappropriate medication use or patient harm) account for roughly two million deaths per year worldwide. Similarly, in the paper, ‘Medication Errors: Technical Series on Safer Primary Care’, published by the World Health Organisation in 2016, it states that in the UK it is estimated that, '38 per cent of all primary care patients over 75 may be affected by a medication error'.

REDUCING MEDICATION ERRORS VIA A LEARNING HEALTH SYSTEM
Evidently, the issue of medication errors could benefit from the LHS approach. Despite the staggering statistics noted however, healthcare professionals only report a paltry 14 per cent of medication errors, citing time required as the main barrier.

This vastly reduces the amount of data entering the learning cycle. Where data is gathered, limited analysis occurs, often because the information is only available in paper form. For the small amounts of data that do reach the interpretation stage, their final destination will almost certainly be the pages of a medical journal. Yet, in America alone, more than 800,000 medical studies are published each year. As a result, information which should be immediately applied in practice becomes lost in a sea of ever-growing biomedical knowledge. On average, it will take the same information 17 years to swim the path between publication and practice.

For a LHS to successfully tackle the issue of medication errors, a fully-integrated infrastructure is required. In terms of policy, several leaps forward have already been made, most notably the World Health Organisation's commitment to halve medication-related errors by 2020. Now, the stage is set for the introduction of technological solutions on a global scale.

THE PHARMAPOD GLOBAL LEARNING HEALTH SYSTEM FOR MEDICATION ERRORS
Pharmapod is creating a Global Learning Health System of the future. With over 10,000 pharmacies using its cloud-based platform internationally, it is providing the necessary infrastructure to enable improvement to happen routinely and with economies of scale – a key requirement of a true LHS.

Rather than gathering data to satisfy regulatory requirements alone, healthcare professionals can now engage in the LHS approach. Information about medication errors and near-misses – from single pharmacies to multiple sites – can be regularly collated. From there, the platform can carry out an effective root-cause analysis and offer pharmacists a mechanism to track their preventative measures and improvements to their own practice.

When actions are taken, the platform can evaluate the impact on practice, thus completing the learning cycle. The Pharmapod platform can get the right information to the right person(s) at the right time, locally in each pharmacy as well as on an aggregate basis through each of Pharmapod's National 'Response Teams' made up of local academics and medication safety experts.

Pharmapod's founder and CEO, Leonora O'Brien, is a pharmacist. This is key to its success. One of the reasons IT systems in healthcare have limited benefit is because when they are developed commercially, they are very rarely developed by healthcare professionals.

IMPORTANCE OF A JUST CULTURE
Melissa Sheldrick, a mother who tragically lost her eight-year-old son Andrew through a medication error in 2016, has been involved in the Pharmapod training in Ontario, Canada. Here, she explains how the right culture must be present to enable a LHS to flourish.

Analysing and collaborating on how to prevent incidents from occurring or recurring is an essential piece of a pharmacy team's work. The objective must be to adopt a 'systems approach' and not a 'person approach' when dealing with incidents. A 'person approach' focuses on what the person did wrong and blames them, whereas a 'systems approach' concentrates on examining the conditions the person works under, the training that is in place, and the supports they have.

This system aims to build preventative measures into the healthcare organisation's processes so that the same errors do not recur. When there is a culture at work that does not apportion blame but instead strives to support your development as a professional, that is when the learning occurs. This is the reason Pharmapod also now offers a platform to objectively measure an organisation's Patient Safety Culture and provides training to help embed a just, non-punitive culture of safety and learning.

REFERENCE
1. The Learning Healthcare Project: Professor Charles Friedman
BEFORE YOU KNOW IT

A shocking report is blazing a new trail for Group B Strep medical care – and how it must be better honed to prevent the tragedy currently flooding the lives of far too many families throughout the region. According to the findings, newborn babies are needlessly dying or being left with potentially life-changing disabilities because the NHS is failing to prevent or treat infection caused by Group B Strep at birth, which kills one baby in the UK each week. Things must change. But how?

WHAT IS GROUP B STREP?
Group B Strep is a bacterium carried by many adults, commonly in the gut or in the vagina. Carriage is not an infection or illness, rarely causes any symptoms, and doesn’t need to be treated. Carriage should therefore be regarded as ‘normal’.

Group B Strep is the most common cause of life-threatening infection in newborn babies in the UK – and is carried by approximately 25 per cent of pregnant women without symptoms or side-effects. Many times, the first time that a significant proportion of parents hear of it is when their baby is sick in hospital with meningitis, sepsis, or pneumonia. Despite its potential severity, new and expectant mothers are often not informed about Group B Strep as part of routine care, which the Group B Strep Support charity is working to change.

On average in the UK, two babies a day develop Group B Strep infection. Although most make a full recovery, every week one baby will die, and another will survive with life-changing disabilities.

REPORT REVEALS WORRISOME RISKS
A new report, The Cost of Group B Strep Infection, by the Group B Strep Support charity, looked at 32 legal cases of potential or admitted clinical negligence against the NHS, where a Group B Strep infection was suspected or confirmed. It found that, in nearly two-thirds of cases (62.5 per cent), a breach of duty of care by the NHS was responsible for the injury. The most common reasons for a breach were a negligent failure to give preventative antibiotics in line with clinical guidelines, or a negligent failure to spot the significance of emerging signs of infection. Signs missed in the babies included: the inability to feed or poor feeding; more than 10 per cent loss of weight following birth; and grunting and respiratory problems.

Shockingly, these cases, alone, cost the NHS nearly £40 million in compensation, with additional ongoing cases from the six law firms surveyed estimated to cost a further £10 million if successful.

According to maternity charity, Baby Lifeline’s new Mind the Gap report, which was published towards the end of last year, the NHS currently faces claims of £2.1 billion on maternity-related clinical negligence cases (2017–to–2018 figures), compared with the £1.9 billion per year that is spent on delivering babies.

TURNING WORLDS UPSIDE-DOWN

In the 32 cases studied, the three top reasons given for taking legal action were: dissatisfaction with the hospital’s investigation or handling of their complaint; clinical failings around the time of birth or issues emerging later (e.g. the child not meeting developmental milestones); and the need for financial support for the continuing care of a child. Tragically, two mothers wanted answers to their questions because they felt responsible for the Group B Strep infection that had had a life-changing effect on their child.

Helen Richardson and Adam Rudd’s daughter, Martha, suffered severe brain damage during her birth, after doctors at Royal Surrey County Hospital failed to diagnose devastating Group B Strep meningitis at birth. As a result, Martha, now nine years of age, has cerebral palsy, severe brain damage, and requires around-the-clock care. She is a life-limited child.

Just one day after Martha was born on 16th December 2008, Helen and Adam were told that their little girl had contracted Group B Strep meningitis during birth. Martha was so desperately ill that she was placed in an induced coma and spent the following two months in an incubator in hospital.

In November 2016 the High Court approved a structured seven figure multimillion pound settlement which will provide Martha with the care she needs for the rest of her life. This followed the Royal Surrey County Hospital NHS Foundation Trust admitting liability for Martha’s injuries.

‘Martha’s illness turned our world upside-down,’ said Helen Richardson.
‘She can be a very happy and content child who enjoys her life as much as she can, but this has destroyed her life and ours as a family.’

‘Adam has had to give up his work to care for Martha and I work one day a week when Martha’s health allows. Some people wrongly think compensation is a windfall, but it is not. It ensures Martha is able to access the support and care needed for her, for as long as she lives. We will continue to worry about her every day that she lives and we cry for the person she will never be,’ continued Helen Richardson.

**RECOMMENDED AREAS OF ACTION**

The Group B Strep Support charity has said that the survey highlights the need for the NHS to improve the prevention, recognition, and treatment of Group B Strep in babies and, as a result, reduce related clinical negligence claims.

Its recommendations from the report are that:

- All NHS trusts should follow national guidelines on Group B Strep from the Royal College of Obstetricians and Gynaecologists and offer better training to staff involved in maternity and newborn care on preventing, spotting, and treating Group B Strep infection
- The NHS should review and improve its complaints and internal investigations processes by involving parents earlier and throughout the investigation.

*The charity has produced an information leaflet, After your Baby’s Group B Strep infection, which provides guidance for those affected by Group B Strep infection.*

**TESTING FOR GROUP B STREP CARRIAGE**

- Pregnant women can take a simple, safe test for Group B Strep between 35 and 37 weeks.
- The most effective test for Group B Strep is an enriched culture medium test (ECM test) and is available from several home-testing services and private clinics
- Although at present the NHS does not routinely test all pregnant women for Group B Strep carriage, in late 2017 the Royal College of Obstetricians and Gynaecologists updated their guidance and recommended that women who tested positive in their previous pregnancy should be offered testing specifically for Group B Strep, using the ECM test, in their next pregnancy. As a result, the ECM test is increasingly becoming available in NHS hospitals intravenous

**PREVENTATIVE MEDICINE IN LABOUR**

- Most Group B Strep infections in newborn babies could be prevented by identifying carriers during pregnancy and offering them antibiotics during labour
- Giving women antibiotics (usually penicillin) in labour reduces the risk of a baby developing a Group B Strep infection by up to 90 per cent

**KEY GROUP B STREP FACTS**

- Group B Strep causes a range of serious infections, including sepsis, pneumonia, and meningitis – it’s the most common cause of severe infection in newborn babies and of meningitis in babies under three months of age
- If left untreated, a Group B Strep infection can kill a newborn baby within hours
- On average, two babies each day in the UK develop a Group B Strep infection and each week, one baby dies from Group B Strep, and another is left with a life-changing disability
- Most Group B Strep infections in newborn babies can be prevented by testing during pregnancy and providing intravenous antibiotics during labour to women whose test results are positive.
- The UK doesn’t routinely test for Group B Strep, unlike America, Canada, Germany, France, and Spain
- Even Bangladesh, Iran, Lithuania and Trinidad and Tobago routinely test pregnant women for Group B Strep
- The test would cost the NHS just £11, and costs from £35 privately

*For more information, visit www.gbs.org.uk.*
The past 12 months have been another significant period of achievement from a UK biosimilar perspective. We have just experienced the patent expiry of Adalimumab, the world’s top selling prescription medicine, which is expected to make the single biggest contribution to the NHS objective of saving in the order of £200 million to £300 million per year by 2021 through biosimilar uptake, according to NHS Chief Executive, Simon Stevens.

In addition, following collaboration between a wide range of stakeholders, including industry, regulators, and clinicians, an updated second version of NHS England’s What is a Biosimilar? guide will be published. This will help further enhance understanding and embed the benefits across the NHS of these important medicines.

So there is a lot to be positive about in terms of further establishing and growing the biosimilars market in the UK. However, complacency can’t be allowed to creep in as challenges remain in 2019 and beyond.

From a regulatory and Brexit perspective, there is still uncertainty which needs to be removed. Today, the one and only licensing route for biosimilar medicines in Europe is the Centralised Procedure, operated by the European Medicines Agency (EMA). If under a ‘no deal’ Brexit scenario the UK is separated from the EMA and the EU regulatory network, then it has not been clear yet how the UK licensing authority, the Medicines and Healthcare products Regulatory Agency (MHRA), would operate.

It’s hoped that the MHRA would review in parallel to the EMA for the assessment of biosimilar medicines, taking account of the EMA opinions, and not duplicate or diverge on scientific issues. It’s vital that the same scientific dossier can be submitted at the same time to the EMA and the MHRA, followed by the same assessment and approval timetable. Some reassurance came from the technical notices published by the UK government last year. These indicated that the MHRA will continue to reference opinions and decisions coming out of the EMA procedure when a company applies to the EU27 and UK in parallel.

However, no mention is made of national control laboratory testing (National Institute for Biological Standards & Control – NIBSC – in the UK) which is an important pillar of the regulatory control of biological medicines. It is important that even if the UK and EU regulatory systems start off in parallel, they do not gradually diverge over time.

Elsewhere, within the UK, we also need to address the significant variability in uptake in different parts of the country, as well as in respect of different molecules. At a headline level, the UK has done very well in using competition to reduce price and thus increase patient access to biological medicines, but there are outliers.

For example, we have seen some biosimilar medicines taking 90 per cent of the market, leading to price reductions of approximately 80 per cent due to the competition introduced by having a multi-source system. However, in other examples the take-up has been less than 10 per cent, leading to a similarly small reduction in price. Competition is available but uptake hasn’t occurred to the same extent. This needs to be examined to see how improvements in take-up can be made.

From the industry’s perspective, companies can provide competition on the supply side but it needs to be accompanied by interest on the demand side if the true extent of savings and increases in access are to be realised.

From a geographic perspective, there are also examples of take-up variability on a hospital trust level. Some are showing high percentages of uptake while others have much lower figures. NHS England is already looking at this via its Regional Medicines Optimisation Committees where sharing best practice across a range of issues are being discussed. Biosimilars have been a priority topic in the first year of these boards but they must stay high on the agenda in 2019.

While a considerable amount has already been achieved in establishing the UK as a market leader for biosimilars, there remains work to be done. A key focus ahead is to build on the collaboration to date and introduce greater consistency of uptake across the board.
Endometriosis affects one-in-10 women – nearly two million women in the UK. It costs the UK £8.2 billion per year in the NHS budget and lost income, however treatments have barely advanced over the last 50 years. There is an urgent need for new treatments for endometriosis. However, promisingly, Wellbeing of Women – a charity dedicated to improving the health of women and babies – is helping to propel progress forward. Here, they provide a snapshot of some of the innovative research which they’re funding, and which we should be aware of.

Endometriosis is a condition when endometrial cells, similar to the lining of the womb, grow outside the uterus, for example, in the pelvis, ovaries, or fallopian tube. Endometriosis is managed surgically or medically, but symptoms recur after surgery in 75 per cent of women and often have unwanted side-effects.

WHAT WE ARE DOING TO CHANGE THIS
There is a real gender bias in research as the disease gets dismissed as ‘women’s troubles.’ Wellbeing of Women is one of the very few funders of research to find a new treatment.

RE-PURPOSING OF ANTI-CANCER DRUGS TO TREAT ENDOMETRIOSIS
Our research with world-leader Professor Andrew Horne at the University of Edinburgh has already shown how endometriosis cells behave like cancer cells. Excitingly, his new project testing anti-cancer drugs on endometriosis tissue is showing promising results. This is the first glimmer of hope for a new treatment for the millions of women who have suffered in silence for years. With support from Wellbeing, the Edinburgh team have demonstrated non-clinical ‘proof of concept’ for a new non-hormonal treatment for endometriosis and have recently secured further funding to perform an exploratory clinical trial of the treatment in women (in collaboration with Ferring) to inform the design of a larger Phase III clinical trial and the development of a local drug delivery system.

UNRAVELLING THE ASSOCIATION BETWEEN ENDOMETRIOSIS AND AUTOIMMUNE DISEASE
Separately, Professor Krina Zondervan, at the University of Oxford, is investigating the link between endometriosis and autoimmune diseases to help identify women at risk and speed up diagnosis.

The team will use the UK Biobank (UKBB), a unique comprehensive national health resource, including data on 273,462 women aged 40 to 69 – of which 5,940 women have been diagnosed with endometriosis, and 14,897 women diagnosed with a variety of autoimmune diseases.
In addition, they will look at large-scale datasets available on endometriosis and autoimmune diseases worldwide to investigate biological links. Using clinical, diagnostic, and genetic data from the UKBB, they will:

1. Assess the risk of different autoimmune diseases in women with endometriosis compared to carefully matched women without endometriosis
2. Investigate whether links between endometriosis and different autoimmune diseases have a biological basis by testing for shared genetics between the conditions
3. Use these genetic results to identify shared biological pathways and novel therapeutic target opportunities

Professor Zondervan said, ‘The most common questions women with endometriosis ask their doctors are: ‘What causes my disease?’, and ‘Does this mean I am at risk of other conditions?’, as there have been several reports of women with endometriosis also suffering from chronic autoimmune diseases.

“We will investigate whether the connection between endometriosis and autoimmune diseases and investigate the biology underlying this connection to identify the mechanisms involved.

“This work will increase our understanding of fundamental disease mechanisms and enable us to develop urgently-needed patient-tailored treatments with fewer side-effects – including the potential to re-purpose treatments used in autoimmune diseases, for endometriosis.’

THE ROLE OF ENZYMES
Currently, diagnosis for endometriosis requires surgical intervention and the treatment strategies are contraceptive-based, which has implications for the patient’s fertility.

Dr Helen Clarke, Liverpool Women’s Hospital / University of Liverpool, is studying endometriosis cells in order to understand how they develop. The aim of the project is to pave a way for new treatments and diagnostics.

“Our preliminary data shows that human endometrial cells express one of the key enzymes identified, MAP4K4,’ Dr Clarke said.

“This enzyme causes the spread of the ectopic cells beyond the primary location.

“When a patient has cancer, the cells begin to rapidly multiply as normal cellular control mechanisms fail,” Dr Clarke continued.

“As the disease progresses, small deposits of cancer (metastases) can be found elsewhere in the body,” Research has been able to identify key enzymes that may play a role in enabling cells to migrate and become invasive.

“This has not only the potential to be a target for cancer therapies, but also an effective treatment for endometriosis.”

UNDERSTANDING THE ENDOMETRIUM
In addition, Dr Alison Maclean, Liverpool Women’s Hospital, was awarded £17,079 over three months to investigate endometrial cells to help improve the understanding of diseases such as womb cancer and endometriosis.

The endometrium is the inner lining of the womb and is a fascinating organ that has the remarkable capacity to shed its superficial layer each month during menstruation, called the functional layer, and regenerate the lost cells and tissue from the underlying layer, the basal layer. This occurs in response to fluctuating levels of the hormones produced by the ovaries: oestrogen and progesterone. This process is important, as it enables the human endometrium to facilitate a pregnancy.

However, faults can occur during this complex process of self-regeneration. As a result, gynaecological diseases can develop, such as endometrial (womb) cancer, which is now one of the most common gynaecological cancers in the Western world and is increasing in number, and endometriosis, which is a debilitating condition causing severe pain, and in some cases infertility.

This project will aim to use two new techniques to show that different types of epithelial cells exist in the endometrium and will use these techniques to isolate them and enable cell-specific research.

The long-term aim of this will be to identify cell types, which can cause certain diseases, and develop cell specific treatments, to improve the survival rates and quality of life of patients with endometrial diseases.

“I now plan to test the feasibility of using laser capture micro dissection to isolate RNA from EECs from the three aforementioned locations in full-thickness endometrial samples to examine the expression of the hormone metabolizing enzyme genes,” Dr Maclean said.

These samples will then be examined to discover the physical boundaries of EEC subtypes.

Dr Maclean hopes to find methods to identify and characterise EEC sub-populations. She said that this will enable us to perform cell specific research to improve our understanding of diseases such as endometrial cancer and endometriosis.’

ABOUT WELLBEING OF WOMEN
Founded 54 years ago, Wellbeing of Women is one of the only charities finding cures and treatments across the breadth of female reproductive health, including pregnancy and childbirth, fertility, gynaecological cancers, and overlooked areas like endometriosis, polycystic ovary syndrome, and the menopause. Many of the routine tests and treatments that form everyday clinical practice can be traced back to our work, such as the use of ultrasound in pregnancy, and the importance of taking folic acid for the health of the unborn baby. We also funded Professor Henry Kitchener who linked HPV to cervical cancer which led to the HPV vaccination programme in schools, making cervical cancer preventable for the first time.

Only 2.48 per cent of publicly-funded research is dedicated to reproductive health and childbirth which makes our work vital.

For more information, and to find out how you can support Wellbeing of Women’s work, visit www.wellbeingofwomen.org.uk.
Having firmly embedded itself in the fabric of Northern Ireland tradition, we have been counting the days until our annual opportunity to express gratitude to the sterling members of our health service. And that time is finally upon us – with the 20th Northern Ireland Healthcare Awards.

The 20th Northern Ireland Healthcare Awards ceremony is driving the heart of the sector to the heart of Belfast; taking place in the Europa Hotel on 28th February, and navigated by esteemed Television Presenter, Pamela Ballantine. The gala – punctuated by a delightful dinner and networking opportunities – will bestow honour on those who not only demonstrate excellent character, but who have cultivated much-needed change in the industry during the last 12 months and beyond.

The finalists in each of the 10 categories have been selected following a hard-fought application process, and the winners will be revealed on the night; culminating with the announcement of this year’s Special Recognition Award recipient.

The evening’s nominated charity is Pancreatic Cancer Action who are formidable in their mission to improve survival rates of pancreatic cancer by ensuring that more people are diagnosed early and in time for surgery – currently the only potential for a cure – and to improve the quality of life for patients. Just some of the measures undertaken by the team include raising public awareness of the disease and its symptoms, helping healthcare professionals diagnose pancreatic cancer sooner by providing free resources and e-learning, and funding important research.

This year also marks a pinnacle time for us as we celebrate 20 years of basking in the region’s healthcare brilliance. Thank you to all who have supported us along the way – be it through sponsorship, or by showcasing their work.

Good luck to all the finalists!

The categories are:

- Asthma / COPD Project of the Year
- Management of Rheumatic Disease in Women of Childbearing Potential
- Pharmacy Student Leadership
- Diabetes Project of the Year
- Most Innovative Use of an eHealth Solution to Improve Patient Care and Safety
- Hospital Pharmacy Team of the Year
- Community Pharmacy Collaborative Working
- Heart Failure Management
- Innovative Developments in the Management of Inflammatory Bowel Disease
- Innovation in Rheumatology Service
- Special Recognition
In 2015 the practice undertook a significant project to identify high risk asthma patients and ensure that all relevant healthcare professionals were engaged in the patient’s care pathway so that the chance of a serious event occurring was minimised.

The original aims set in motion included active case finding within the practices to identify those patients who had markers of poor control – and, in particular, those who were over-ordering reliever inhalers. A pilot project utilising FeNO measurement as an asthma management tool in primary care was orchestrated alongside the risk management project in the three practices.

Asthma patients attending the practice nurse for annual review, or as a result of being symptomatic, were offered FeNO measurement.

The addition of FeNO to the management of the asthma patients has had tremendous benefits – prompting better engagement with their condition, and an overall substantial reduction in FeNO scores.

VISIT WWW.NIHEALTHCARE.COM/AWARDS TO KEEP UP-TO-DATE ON THE LATEST AWARDS NEWS

ASTHMA / COPD PROJECT OF THE YEAR

Caroline Speedy and the Northern Trust Community Respiratory Team

The project’s fruition was sparked by the recognition that 80 per cent of COPD exacerbations are currently managed solely in primary care – yet there are patients who could be supported better remaining at home.

The chief aims of the initiative were thus to work in conjunction with GPs to identify patients and implement a joint enhanced plan for the management of exacerbation of COPD outside the acute hospital setting, and to help facilitate early discharge from hospital, and improve post-exacerbation management.

The team have also been boundless in their implementation of a COPD discharge care bundle, and determination to bolster knowledge in the management of COPD patients in the community, as well as increase capacity for pulmonary rehabilitation.

The 15 practice-based pharmacists collectively worked on this project to improve asthma and COPD control and safeguard patients with the correct dry powder inhaler (DPI) device for them.

Central to the initiative was the decision to review those patients on DPI devices to ensure that all patients were receiving the correct device they were trained on. This work was fundamental to their future care in that patients not receiving the correct device are at risk of poor asthma control and possible hospitalisation.

As a result of the efforts pursued, all patients on DPI inhalers now receive the correct branded device. Crucially, patient compliance has been boosted, too, via increased understanding of the inhaler device and respiratory condition.

Dr Dara O’Donoghue, Barbara Maxwell and Team
Northern Ireland Regional Paediatric Asthma Initiative

The Northern Ireland Regional Paediatric Asthma Initiative – which is being rolled out throughout the region – is multifaceted in its approach to the enhancement of patient care. As such, a number of strategies are being incorporated, including a programme of educational meetings in primary care which target GPs and primary care asthma nurses.

Having garnered excellent feedback, the aim is to put the meetings in place for secondary care too.

An educational programme has also commenced for the enlightenment of both secondary school children and teachers, alerting them to the risks of the disease.

Additionally, the team’s safe discharge protocol is homing in on vulnerable groups in order to optimise their inhaler technique, improve adherence / compliance, and ensure that patients have a personalised asthma plan.

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West Belfast Federation of Practice-Based Pharmacists

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Carmel Loughlin, Anne Travers and Team
Three Spires Surgery, Omagh

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Patients starting biologic therapies undergo a thorough assessment to optimise their safety and biologic drug choice. Plans for pregnancy are assessed by the team and the implications for biologic therapy are considered, while the options relating to biologic therapy should the patient become pregnant are also discussed.

In addition, with regard to patients attending non-biologic clinics, if a female patient has active inflammatory arthritis – but is unable to take methotrexate because she is trying to conceive – then a disease activity score is performed to see if the patient would qualify for biologic therapy. If this is the case, then an individual funding request is submitted to the health board to obtain funding for a biologic drug for the patient. This means that their disease activity improves on biologic treatment which increases their chance of conceiving a pregnancy.

It's also the team’s practice to continue the biologic drug during pregnancy according to British Society Guidance (with full discussion with the patient) in patients who are unable to stop because of disease severity, or because of the patient's choice to remain on the drug.

Shedding a promising light on this course of action is the fact that to date it’s estimated that there have been three successful individual funding request applications to obtain funding for the biologic drug for patients trying to conceive a pregnancy. Also impactful is the estimation that there have been at least three successful pregnancies in patients who have remained on a biologic drug during pregnancy.

Patients with scleroderma are at risk of developing pulmonary hypertension which can be asymptomatic in the early stages, and has a high mortality if untreated or treated late. However, an effective yearly screening programme allows early recognition and treatment which can prolong life.

The team were driven to action as a result of the screening programme becoming ineffective due to a long delay in outpatient appointments, and investigations not being requested on a yearly basis. They therefore implemented a new screening programme for pulmonary hypertension in scleroderma patients.

The scleroderma population is predominantly female, and while including older women, also comprises those of childbearing age. Emerging pulmonary hypertension in younger women with scleroderma is a priority for treatment as pulmonary hypertension can severely deteriorate during pregnancy with a high mortality and pregnancy is not recommended for patients with known pulmonary hypertension.

The quality improvement project has reorganised the screening for pulmonary hypertension for scleroderma patients. Previously, echocardiograms and pulmonary function tests were requested using paper forms completed by the doctor after a patient’s outpatient clinic appointment – yet in the new screening programme the patients are enrolled in an automatic recall programme for Echo and pulmonary function tests without relying on generation of a paper request form at an outpatient clinic appointment. The screening programme therefore runs effectively even where outpatient appointments are delayed.

The benefits attained for patients were assessed during an evaluation of the new service over a one-year period, demonstrating that it had been conducted very successfully, and subsequently expanded to include other consultants' patients.

Dr Nicola Maiden and the Craigavon Rheumatology Biologics Team
Southern Health & Social Care Trust
Upon reflection of her own abilities, goals, and perceptions of what may lie ahead as she progresses towards the completion of her degree, Emma has taken strides in her awareness of the healthcare landscape, and undertaken ways in which to garner further experience.

Spurred on by this, Emma joined the St John’s Ambulance LINKS unit at Queen’s University. She also took strides to bolster her expertise in pharmacy during her summer break by way of completing various community placements. She can thus now relate to the role more, and recognise the immediate challenges faced by the pharmacist within the local community.

In February 2018, Walter initiated a cultural event in the School of Pharmacy – the first ever student-led event regarding global healthcare and pharmacy culture around the world. Seeking to inspire his fellow students to appreciate cultural diversity and consider work as a global citizen, Walter invited many international students as guest speakers to share the healthcare system in their own countries. This innovative work was presented at the QUB Learning and Teaching Conference: Creativity and Innovation in Teaching which further helped to disseminate the important novel concept.

Working part-time in a busy independent community pharmacy for over three years has allocated Eimear a vital opportunity to develop her communication, knowledge, and leadership skills. As an important member of the team, Eimear has played her part in helping the pharmacy improve by partaking in non-compulsory dementia-oriented training headed up by a representative from The Alzheimer’s Society. Equipped with this newfound knowledge, Eimear became a ‘Dementia Friend’, and every Saturday now dons a badge as part of her uniform to make customers aware of her training.

As a result of currently taking up the role of a course representative of the Level 2 MPharm students in Queen’s University Belfast, Christine is in constant contact with her fellow peers, recognising the importance of taking on-board their views, and helping to address any problems. Christine’s positive impact has been asserted in helping her classmates know the critical importance of constructive feedback and that the only way to reach a consensus is to talk about everybody’s position and opinions, with a focus on possible solutions.

As a class representative for the fourth year running at the University of Ulster, Coleraine, Ciara has earned respect from her fellow students and lecturers alike. She has particularly harnessed her diplomacy skills, communicating issues in a two-way flow. An example of Ciara’s tactful nature came to fore following the scheduling of a significant exam on a date universally unsuitable to the majority of her class. Sparked by the strength of feeling among her peers, Ciara engaged in discussion with the course director, which resulted in the exam being moved to a more acceptable date.

Embarking on her second year as a course representative, Natasha regularly utilises her initiative and forward-thinking to reach resolutions that will help improve the course for both current students and budding learners. Fully immersed in the university process, and how she can assist others, Natasha participated in an open day, and international student webinar sessions – successfully interacting with other international students, and encouraging a flourishing, diverse environment.

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Spurred on by this, Emma joined the St John’s Ambulance LINKS unit at Queen’s University. She also took strides to bolster her expertise in pharmacy during her summer break by way of completing various community placements. She can thus now relate to the role more, and recognise the immediate challenges faced by the pharmacist within the local community.
Serving over 10,000 patients, with a growing diabetic population of 600 patients that has increased exponentially over the years, the ethos of the Old School Surgery regards the delivery of a comprehensive first-line service with minimal referrals to secondary care.

In order to achieve this aim the team personally manage the care of their diabetic patients, from initial diagnosis to the administration of insulin, without consultant support.

In response to the glycaemic legacy in diabetic control, by escalating treatments early in the diagnosis, the aim is to improve long-term prognosis. For this reason, patients are reviewed more regularly than is achievable in secondary care, and treatment progressed accordingly.

When the practice-based pharmacist looked at the current working arrangement for diabetic patients and their review, it came to light that something wasn’t right with the regularity of attendance at the review clinic for many patients.

The programme subsequently comprised education on diet and exercise, and support and signposting to ensure that patients felt that the team were there for them.

Inspiration for the initiative struck when the practice nurse raised concerns at one of the team’s weekly clinical governance meetings regarding the increasing number of patients with HbA1c readings of 42-to-48 mmol/mol who had not been reviewed in the last two years due to changing workforce dynamics.

After considering different options as to how to approach these statistics, and offer an appointment to each, the practice manager suggested the provision of group sessions in smaller or larger groups.

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Establishing an integrated diabetes service in the Western Health & Social Care Trust has been an ongoing project over the last five years.

In order to ensure the most impactful application of resources, the service is based on a risk-stratified approach to diabetes care. The introduction of a single point of referral to the diabetes specialist team via CCG has enabled a patient-centred focus, with a reduction in the duplication of services, and a reduced burden of appointments for patients.

The management of trust-wide diabetes referrals via etriage process on NIECR was introduced, and a standardised approach to referral triage ensures equity of service.

Specialist diabetes clinics have also been devised at hospital sites, with ongoing support planned with diabetes multidisciplinary teams at hub sites throughout the trust.

The haemodialysis unit at the Belfast City Hospital provides maintenance haemodialysis to approximately 180 patients, of whom approximately 60 have diabetes.

Patients attend three-to-four times per week for up to four hours at a time. These patients are frail with multiple complications of diabetes – however the current model of diabetes service provision fails this cohort, with the individuals finding attendance at clinics difficult.

Prioritising the patients’ needs, the team now provide diabetes care to this group by bringing diabetes services to the patients in the dialysis unit. Standard diabetes outpatient appointments are replaced by a consultant-delivered diabetes assessment in the dialysis unit, with diabetes specialist nurse and dietitian input.

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Dr Ian Wallace and Dr Ailish Nugent
Belfast City Hospital Diabetes Service, Belfast Health & Social Care Trust

Dr Neil Black, Lesley Hamilton and the Diabetes Specialist Team
Western Health & Social Care Trust

Dr Heather Bell and Team
Old School Surgery, Greenisland

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Analytics Engines were awarded the Phase one SBRI project, entitled FAST in 2017. The objective of this project was to develop a tool for improved pharmacy staff deployment and management. Phase two of the project involved deployment of the developed system on Western Health & Social Care Trust infrastructure and connection to the PAS system in order for the application to display patient details to the pharmacists working in the hospital in a live clinical field trial. Following the successful conclusion of phase two, Analytics Engines has productised this in an eHealth solution called PRECISION for Pharmacy.

PRECISION for Pharmacy is accessible to all authorised pharmacy staff from ward-based PCs and via mobile devices, enabling pharmacists and pharmacy technicians to manage patient needs, both at the bedside or remotely from another ward, or while in the dispensary.

The introduction of SensorCentral represents an important tool in the safeguarding of individuals’ welfare, taking the form of a remote health sensor data aggregation and analysis platform developed with a primary application to monitor activities of daily living and warn of changes in routine which may be linked to deteriorations in health. This early warning allows timely intervention; thereby improving patient care and outcomes.

As care costs escalate and provision is squeezed there are increased pressures for patients to remain in their own home as much as possible. Therefore, a 24 / 7 Ehealth solution greatly increases the ‘observation’ of patient health through normal activities, with SensorCentral being a platform to leverage raw data from a multiplicity of in-home sensors, and provide a level of care and reassurance previously unavailable.

The Health+Care Data Quality Team 
HSCNI, BSO

Through the use of the Data Quality Toolkit, trusts have been able to identify in real-time where patients’ demographic data mismatches what is held on the central Health+Care Number Index. These mismatches in data prevent patients’ records being viewable on the NIECR, resulting in clinicians only having an incomplete view of the patient record.

Through the creation of the Data Quality Tools, health and social care staff are granted the ability to resolve a mismatch before the patient’s tests are completed – ultimately ensuring that all of the relevant information is available for the clinical consultations.

To fully harness the potential of the tool, a number of consultation workshops took place to develop the specifications for the solution. A range of iterations were also tested with an agreed control group, as it required a regional approach to ensure that the communications were successful.

The Nothern Ireland Connected Health Innovation Centre
Ulster University, Jordanstown

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The Southern Health & Social Care Trust carried out an extensive procurement exercise in 2012 to procure an integrated community information system. Civica, with their PARIS product, were the successful bidder – and since then the trust has made steady progress rolling out the system, and now has a core user base of 3,000+ multidisciplinary users.

District nursing was implemented as part of the integrated care teams’ implementation on PARIS back in 2015, in which a number of developments have taken place. These include a district nursing referral form, and a district nursing dashboard, in addition to an electronic version of the Northern Ireland Single Assessment Tool.

The project’s emphasis on improved patient care, safety, and outcomes has gone from strength-to-strength through the introduction of electronic record-keeping and mobile working – leading to patient records being recorded in a timelier fashion.
The Western Health & Social Care Trust Pharmacy Quality Assurance Service takes the form of a small team based in the Altnagelvin Hospital Pharmacy Department – adopting the overarching function of ensuring the quality of medicines purchased, made, stored, and used in the trust. In line with this, the team’s regular work centres on the provision of technical support and advice around the aseptic unit specials manufacturing license; medical gas use and safety; and the quality of unlicensed medicines.

The largest of these would be ensuring the continued licensing and safe operation of the aseptic unit through a programme of physical and microbiological environmental monitoring and the implementation of the quality management system. As an integral service, the team also advise on the stability of the manufactured products and day-to-day release of batches, in addition to retaining responsibility for the assessment and release from quarantine of all unlicensed medicines used in the trust.

Victoria Pharmaceuticals at Knockbracken (VP@KBN) – an expanding unit comprising 11 staff – relocated to Knockbracken in September 2016 hot on the heels of the team securing a wholesale dealers authorisation license from the Medicines and Healthcare products Regulatory Agency (MHRA). During their recent successful MHRA inspection, the inspector granted them a manufacturing specials license.

Emerging as a highly valuable asset to the healthcare sector, the team’s role encompasses replenishing and distributing emergency drug kits to the Northern Ireland Ambulance Service, the private ambulance company, Proparamedics, trust pharmacy departments for onward use at ward level, and the Northern Ireland Helicopter Emergency Medical Service.

Broadening their scope, the team also supply a range of drugs to GP out-of-hour clinics, the occupational health department for private customers, the Public Health Agency, Belfast Trust theatres, and dietetic and tissue viability nurses. In a further step, VP@KBN are working closely with the Health & Social Care Board on a brand new bespoke project for elective care centres within Greater Belfast and the South and East regions.

The Intermediate Care (IC) Pharmacy Medicines Optimisation for Older People (MOOP) Team are armed with a substantial skillset – which is regularly put to use – courtesy of the diverse make-up, consisting of a consultant pharmacist for older people, an intermediate care specialist pharmacist, a clinical pharmacist, an intermediate care clinical technician, and a medicines adherence pharmacist. All of the pharmacists are independent prescribers with experience in providing specialised pharmaceutical care in older patients.

The Pharmacy MOOP Team work in trust IC beds (20 beds in a local community hospital), in addition to IC beds within a private nursing home (29 beds, Donnali Four Seasons Healthcare). All of the patients admitted into the consultant geriatrician-led IC units receive a high level of pharmaceutical care from the MOOP IC Team.

One of the primary roles of the team is to undertake evidence-based medicines reviews to optimise medication regimens and reduce inappropriate polypharmacy. Fulfilling this responsibility, the team attend the IC Multidisciplinary Team meetings, and assist with the discharge letters, discharge planning, and the accurate transfer of pharmaceutical information on discharge to primary care.

The Victoria Pharmaceuticals Team
Belfast Health & Social Care Trust

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The Pharmacy Quality Assurance Service Team
Western Health & Social Care Trust

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Eoghan O’Brien and Team
Bannside Pharmacy, Portglenone

Eoghan has long identified both the necessity and advantageous nature of collaboration between general practice and community pharmacy, particularly in our current climate, whereby the sector is experiencing pounding time and financial pressures. As a result, he believes that community pharmacy is in an ideal position to absorb some of their workload in areas relating to acute conditions, and long-term condition management – including type 2 diabetes and cardiovascular disease.

Helping to forge these closer ties, Eoghan received some funding from the Diabetes UK Innovation & Improvement Fund to run a 12-week programme for 10 people with type 2 diabetes, entitled the Portglenone Diabetic Partnership, with the aim of helping them achieve better control and/or reversal of this condition.

Through this initiative, the team successfully developed a closer working relationship with the participants’ GP practice diabetic nurses, for example, by receiving information from them regarding the participants’ most recent HbA1c reading before the programme began and any changes in medication that had happened by weeks 12 and 24.

Jonathan Lloyd, Deirdre McCloskey and PACT Community Pharmacists
IMPACTAgewell® Partnership

The vision of IMPACTAgewell® is to improve the quality of life for older people by providing them with person-centred services which put their wellbeing and social needs on a par with their medical needs.

With the support of an IMPACTAgewell® project officer, local GPs, community pharmacists, and health trust staff, older people are supported and empowered to manage their long-term health conditions, and also to access the wealth of community/voluntary activities in their neighbourhood.

Since April 2017, six IMPACTAgewell® locality hubs have been established as part of this three-year programme. These hubs aim to work with 1,100 people aged 65 years and over, identified as living alone, or with another older person in their own home, at risk of comorbidity, polypharmacy, and social isolation, via a referral process, to develop personalised action plans aimed at encouraging them to participate actively in improving their health and wellbeing.

The project showcases the strides to patient care when can be executed via a collective approach in that by working together, the partners in each locality hub develop an understanding of what matters to each older person over a period of six months.

Stephanie Haughey and Team
McCartan’s Pharmacy, Newry

Steadfast in the belief that community pharmacies, as a frontline service, have a lot to offer patients – yet concerned with the limited awareness of patients concerning this – an initiative was set up to educate patients on the offerings, as well as other groups and charities.

Through the project, valuable partnerships emerged in various forms: between the patients and pharmacist Stephanie; between the group members themselves; and between the community pharmacy team and different charities, such as Homestart, Space NI, and Centred Soul.

AWARE of how working in partnership benefits the local community, Stephanie has worked with the Community Development and Health Network on a number of Building the Community-Pharmacy Partnership projects. In 2015, she worked with a local care home in conjunction with Action Mental Health and facilitated a group of patients with learning difficulties and mental health issues.

Stephanie also became involved with the National Childbirth Trust which promotes and supports mothers around issues faced in the first 1,000 days after giving birth. In order to ensure that each of the participants derived the maximum benefit.
HEART FAILURE MANAGEMENT

Dr Lana Dixon and the Belfast Health & Social Care Trust Heart Failure Team

At the core of the team’s strategy has been the development of a service which offers patients a streamlined approach to the diagnosis, management, and follow-up of heart failure. In line with this, a one-stop diagnostic heart failure clinic has been established, whereby GPs can refer patients with suspected heart failure, and the aim is to see the patient within two weeks. If heart failure is confirmed, they are reviewed by a consultant cardiologist, and an appropriate treatment plan is tailored.

Further bolstering their service, the trust have developed the first ambulatory heart failure unit in Northern Ireland. The dedicated team of community-based heart failure nurses have proven to be an impressive addition too, monitoring and reviewing heart failure patients in the community who are no longer able to make it to outpatient clinics. These nurses work closely with GPs, and also boast strong links with palliative care.

Carol Patton and the Southern Trust Heart Failure Team

Recent evidence, and resulting guidelines, have shed light on the great benefits attained from changing to Sacubitril / Valsartan therapy for patients who continue to have low EF and symptoms despite maximal medical therapy. Spurred into action, the team’s project was to introduce Sacubitril / Valsartan into the Southern Health & Social Care Trust heart failure population – initiating the treatment safely and timely in appropriate heart failure patients within existing caseloads.

Within the team’s unique service model each nurse can review patients in whichever setting the individual finds themselves. This enabled the identification of appropriate patients and the initiation of Sacubitril / Valsartan at every available opportunity, in addition to the facilitation of close monitoring and review.

In terms of recorded outcomes, Sacubitril / Valsartan has been initiated in almost 600 patients in the Southern Health & Social Care Trust area, while positive patient outcomes include an improvement in NYHA class, improved energy levels, and less reliance on high dose diuretics for some of these patients.

Paula Lindsey and the Regional Heart Failure Specialist Nursing Team with British Heart Foundation and HSC

The Northern Ireland Regional Heart Failure Forum and British Heart Foundation Northern Ireland Health Service Engagement Team have recognised the need to provide regional guidance, advice, and support for heart failure patients at their end-of-life.

This work prompted many much-needed changes to practice. In particular, it highlighted the need for the introduction of a formalised educational role post-ICD insertion to support patient understanding around the role of their device, and deactivation when deemed appropriate at end-of-life.

A separate working group will now be established in partnership with the Health & Social Care Board to devise clear information and support for patients and healthcare professionals to identify those with ICD devices and ensure that appropriate planning measures are taken to prevent community deactivation in the future.

The phenomenal collaboration and volume of work completed to date from professional clinicians, primary and secondary care settings, the educational and charity sectors, as well as others, demonstrates their dedication.

Stephanie Greenwood and the Heart Failure Service Improvement Project Team

The Heart Failure Service Improvement Project, when initially established, acknowledged the need to provide regional guidance, advice, and support for heart failure patients at their end-of-life.

The team were keen to implement a number of improvements, including the transfer of booking of outpatient clinics to the central booking team within the trust. This has successfully allowed the heart failure nurses to provide additional patient contact episodes, in addition to the smoothing of the imbalance in waiting lists within the team by offering the next available slot. The team have also applied the Cardiac Rehabilitation Programme for heart failure patients within the trust, and a training and support programme for inpatient nursing teams was carved out in conjunction with ward based-staff.

The service initiatives have not only proved sustainable, but have provided the foundation for further sustainable transformation in the future.
Dr Gaurav Manikpure and the IBD Patients Panel Team
Northern Health & Social Care Trust

The roots of the team’s IBD Patients Panel initiative have been forged in line with Crohn’s & Colitis UK’s recommendations that hospitals in the UK should have a patient panel, which is a forum where patients and their carers can voice their concerns.

With the Northern Health & Social Care Trust not possessing a patient panel – and despite Causeway Hospital only comprising two full-time consultants – it’s the first site where an IBD Patients Panel is taking shape. To guarantee that the outcome is as effective for patients as possible, the process towards building the panel has been thorough and extensive. As such, two open days for IBD patients and their carers to explain the role of the IBD Patients Panel were held. Patients have reached out expressing their interest in enrolling in the panel, and the aim is thus to get it up and running soon.

Maura Corry and the North Belfast GP Federation / Federation Support Unit Team
Belfast Health & Social Care Trust

To confirm that IBD patients receive a quality review in primary care by practice-based pharmacists, a training service was planned, scheduled, and delivered – essentially commencing as a local training event by the local specialist IBD nurse in the Belfast Health & Social Care Trust area. Proving to be extremely worthwhile, the decision was made to roll the service out regionally to all practice-based pharmacists by employing the Project ECHO model.

The Federation Support Unit invited the specialist nurses to participate in Project ECHO – a ‘hub and spoke’ training model involving video conferencing technology that allows shared learning in practice. The hub is the multidisciplinary group of experts for a specific clinical area.

In targeting medicines optimisation for IBD patients in primary care, practice-based pharmacists have reported a better understanding of the medicines used in IBD, in addition to a clearer understanding of the duration, dose, and route of administration for both prevention and treatments.

Jackie Kearns and Joanne Brown
Antrim Area Hospital, Northern Health & Social Care Trust

In May 2017 a blood test for adalimumab and infliximab drug levels and antibody development was introduced in the Northern Health & Social Care Trust. Pre-dose blood samples were taken at the IBD clinic in selected patients – with this study aiming to analyse the use of biologic testing in Antrim Area Hospital by determining the number of patients who were sampled and why, in addition to the outcome of the results, and the impact on their pharmacotherapy.

The introduction of drug and antibody level testing has proven beneficial in the treatment of IBD in Antrim Area Hospital. This is due to the fact that the results allow for the confirmation of the appropriateness of therapy, or provide reasons for the lack of / loss of response to therapy.

In terms of its future footing, this offering remains sustainable and promising, granting patients the opportunity to benefit through medicines optimisation, multidisciplinary team working, and increased knowledge of therapeutic drug monitoring.

Ruth Hall and the Self-Management / Flare Card Project Team
Southern Project Team

In order to meet the expressed needs of patients and healthcare staff, the team have produced a self-management leaflet – a user-friendly folded Z-card which is distributed to patients and staff, containing key management strategies for a flare of their condition.

The leaflet’s creation has been made possible through the collaboration of various experts who have shared their experiences and suggestions. The resulting guidance promotes the safeguarding of care – representing a straightforward, fuss-free resource for patients to bring to their GPs, suggesting four steps to help manage their IBD.

Access to the information is encouraged via the multiple ways it can be obtained to patients directly in the hospital environment; through post via GP practices; and through community and hospital pharmacy. The team are also in the process of making the card available electronically, while the tool can be made available in poster format for training or GP pharmacists reference.
INNOVATION IN RHEUMATOLOGY SERVICE

The gaping need for the Rheumatology Rapid Access Clinic was evident following the realisation that there was an increasing volume of acute referrals seeking rheumatology opinion from multiple hospital sites and GP practices in the Belfast Health & Social Care Trust. This resulted in delays for patients, with inevitable prolongation of symptoms and associated anxiety.

The Rapid Access Clinic was therefore conceived to address these issues, and has been running since September 2016. This has proven to be a sustainable and effective change in practice, resulting in reduced wait times and improved convenience and care for patients with rheumatological symptoms, as well as enhanced patient flow generally.

There is one clinic with six patient slots per week – staffed by a rheumatology staff grade doctor and two rheumatology nurse specialists with consultant rheumatologist support; essentially designed to optimise timely, appropriate management of individuals.

Dr Maura McCarron, Dr Mark Hoey and the Biologics Unit Musgrave Park Hospital Team

Patients attend the Biologics Unit for the assessment and administration of biologic therapies which are given by infusion or injection – which can significantly improve the quality of life for people with arthritis, but which can be associated with serious adverse side-effects.

However, in early 2015 a number of issues impacting on the optimal operation of the unit were identified, including the increasing number of patients on biologic drugs, and the lack of structured, standardised assessment and documentation.

A vision was subsequently carved out, focussing on the provision of succinct, relevant information on therapies for new staff; the development of a structured proforma for use in the biologic clinics to standardise assessment / documentation; and a proforma to be available online, linking to the Electronic Care Record, thus avoiding duplication of effort.

The culmination of the project has been the creation of a robust system to provide assurance that safety and quality are paramount.

Dr Ashley Elliott, Anne Quinn and the RVH Rheumatology Medical and RSN Team

The Tight Control Strategy in Psoriatic Arthritis project entailed the patients being reviewed every four weeks by either a medical or RNS team in order to achieve minimal disease activity (MDA) by six months.

A thorough approach was key to the effectiveness of the work, with patients being seen regularly, and their treatment escalated, and IA injections provided as required. Ultrasound scanning was also employed to assess for active disease, along with the measurement of co-morbidities.

As a result of the modes of action, many outcomes became clear. All Sulfasalazine patients didn’t get to MDA at three months; MDA was achieved with 7/15 on oral methotrexate at three months, MTX 6/14 achieved MDA at 6/12; and there was only one patient on SLZ monotherapy at six months and not at MDA.

Forward-thinking in their next steps, the team intend to continue to provide tight control for patients newly-diagnosed with PSA, and have a goal for MDA at six months.
NEW YEAR SPECIAL

SETTING THE BAR

If you’re a social media stalwart, you may have been privy to the recent onslaught of posts revolving around New Year’s resolutions, with unrealistic promises at times taking precedence. But this year, why not help your patients make a lifestyle transformation which has benefits which far surpass merely the 12 months of 2019? While many people enjoy social drinking, we definitely have a serious drinking problem in that every year far too many are harmed or even killed by alcohol, often cheap alcohol, either by getting serious illnesses or by being involved in accidents, fights, or as victims of domestic abuse fuelled by it. Fiona Sim, Chief Medical Advisor to Drinkaware UK, shares her know-how for cutting down, or stopping, excessive drinking.

Fiona Sim

It does not have to be in our culture to drink to excess, but certainly many popular activities – sporting, celebratory, social – are almost by tradition linked with drinking too much alcohol. However, in the UK, younger people are drinking less than previous generations and that trend is likely to continue. But by contrast, among men and women aged 45-to-64, we are seeing increasing numbers drinking substantially more than the upper limits in the Chief Medical Officers’ (CMOs) low risk guidelines (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/545937/UK_CMOs__report.pdf).

It’s common for people who drink regularly at potentially harmful levels not to acknowledge it for quite some time. It’s problematic for most people to answer honestly if they find it difficult to enjoy themselves or relax without having a drink: but if they do, it’s possible they have become dependent on alcohol. Although statistically one-in-five UK adults drinks more than the CMOs’ low risk guidance of not more than 14 units a week for both men and women, three-quarters of people surveyed nationwide in 2018 claimed that they didn’t drink too much.

14 units equates to (just) six standard 175ml glasses of wine (13 per cent alcohol by volume) or six pints of beer (four per cent alcohol by volume).

KNOWLEDGE IS POWER

Health professionals need to know what problems alcohol can cause in order to answer their patients’ questions or to raise the subject with them sensitively. Drinking alcohol increases the risk of getting a whole range of serious long-term medical problems, from heart and liver disease, to several types of cancer and mental health problems.

As well as causing diseases, alcoholic drinks contain a lot more calories than most of us realise, and so drinking less can be an effective incentive for those needing to lose weight.

Last but not least, people who have drunk alcohol are far more likely to be involved in any sorts of accidents and in domestic violence.

Health professionals might be asked about the health benefits of alcohol. Although there is some evidence to suggest that a small amount of alcohol might be associated with less chance of getting certain types of heart disease in people over 55 years of age, this one possible benefit is greatly outweighed by the risks of all the other medical problems if you drink alcohol regularly.

Most experts now say that there is no completely safe level of drinking, so it is important that we understand the risks when we offer advice about drinking.

STAYING ON-TRACK

People can count and keep track of the number of the units they drink week-by-week, by using one of the free apps that are available for smartphones – for instance, the Drinkaware app (www.drinkaware.co.uk/tools/app). That can help someone to see how much they are drinking and also to monitor their efforts to cut down. They can also keep track of drink-free days, using the Drink-Free Days website (www.drinkfreedays.co.uk).

For health professionals, it’s important to know that there is evidence that identification and brief intervention (IBA) can be effective, and it takes only a very few minutes to administer. Visit www.e-lfh.org.uk/programmes/alcohol to access free self-guided online training on IBA, tailored for primary care, pharmacy, dentistry, and hospital settings.

BENEFITS OF CUTTING DOWN

SUBSTANTIALLY OR STOPPING COMPLETELY

APPEARANCE

Firstly, a lot of people don’t realise that alcohol causes dehydration, and one place that really shows is their skin. Dry skin, often with a flushed complexion, isn’t a look most of us would choose. Secondly, the calories in alcohol often go unrecognised and contribute to being overweight and obese. A great way to lose weight is to cut down on alcohol.

MIGRAINE

In some people, migraine seems to be triggered by alcohol. This can be any alcoholic drinks or a specific one, so it’s worth patients keeping a diary of what they eat and drink to identify what their triggers are. If they have alcohol-related migraines, the individual might need to stop drinking completely to prevent them.

CANCER RISK

Alcohol has been proven to be linked with seven types of cancer, including breast cancer, bowel, and some other common cancers. Not drinking or drinking within low risk guidelines reduces the risk of these cancers.

For more information, visit www.drinkaware.co.uk.
New Neocate Syneo

Help rebalance gut microbiota dysbiosis in infants with CMA with new NEOCATE SYNEO

THE ONLY AAF WITH PRE- AND PROBIOTICS*
clinically proven to bring the gut microbiota closer to that of healthy breastfed infants

Neocate: Fast and effective resolution of CMA symptoms

This information is intended for Healthcare Professionals only.
Neocate Syneo is a Food for Special Medical Purposes for use in the dietary management of Cow’s Milk Allergy, Multiple Food Protein Allergies and other conditions where an amino acid-based diet is recommended, and must be used under medical supervision.

*Accurate at time of publication, May 2018
Probiotic Bifidobacterium breve M-36V and prebiotic scFOS/lcFOS blend
CMA: Cow’s Milk Allergy
AAF: Amino Acid-based Formula


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For more information visit www.nutricia.ie/neocate
For samples or information, please Freephone 1800 923 404 (ROI) 0800 783 4379 (NI)
Food allergies are on the rise, with CMA being one of the most common allergies in infants and young children. Modern lifestyle and environmental factors have contributed to the rising prevalence of food allergies globally.

In early life, the infant gut and immune system are rapidly developing. Environmental factors such as mode of delivery, diet and use of antibiotics influence this process. An imbalance in the gut microbiota, known as dysbiosis, is suggested to be one of the key candidates contributing to the current allergy epidemic.

The role of early life nutrition

Nutritional support in early life is an essential part of the clinical management of infants at risk of and with food allergies. International guidelines for the management of allergic diseases include recommendations for both primary prevention and dietary management of food allergies.

Allergies – a question of exposure?

Exposure to allergens early in life influences the development of allergen-specific immune responses. Reduced exposure to antigens and a failure to educate the immune system appropriately, may contribute to the increased incidence of food allergy. Food allergy results from a failure to develop oral tolerance, a state of active non-responsiveness to ingested soluble antigens mediated by gut-associated intestinal lymphoid tissue. Several studies strengthen the concept that oral tolerance can be promoted by nutritional intervention by combining the exposure to low dose cow’s milk allergens, in combination with prebiotic oligosaccharides. The right environmental conditions, including good nutrition, can support optimal tolerance development, meaning that the immune system recognizes proteins as harmless, preventing an adverse immune response.

Early life nutrition has a profound effect on a child’s immune development, and is key to help avoid and alleviate future allergic diseases

Dr Adam Fox, Consultant Paediatric Allergist

Primary prevention
For infants at risk, and if breastfeeding is not possible, international guidelines recommend partially hydrolyzed cow’s milk protein formulas for at risk patients. Clinical trials have shown the potential to reduce the risk of developing atopic dermatitis in high risk infants, compared to intact protein formulas. However, since the evidence from the different clinical studies is not fully consistent, in some countries there is debate on these recommendations.

Dietary management
For infants with CMA and in whom breast-feeding is not possible, expert opinion recommends use of hypoallergenic formula such as extensively hydrolyzed cows milk protein-based formula (eHF) and amino acid-based formula (AAF). Whilst an eHF is suitable for the majority of CMA infants, between 10–40% of patients will require an AAF.
The role of pre- and probiotics in CMA

Gut microbiota dysbiosis has been reported in infants with allergic conditions with low levels of *bifidobacteria* and *lactobacilli* compared with healthy, breastfed infants. Human breast milk contains human milk oligosaccharides (HMOs), which have probiotic activity, and pass undigested to the colon and serve as substrates to support the developing microbiota. It is now also recognised that human milk contains beneficial bacteria, such as *bifidobacteria*, that provide a continuous supply of bacteria to the infant gut. Given the presence and important role of both HMOs and bacteria in human milk, acting as a natural probiotic, and recognising that breast feeding is not always possible, ways to positively support the development of the microbiota of formula fed infants by the introduction of pre- and probiotics to the diet have been sought.

Pre- and probiotics aim to influence the immune system directly, or indirectly, via the gut microbiota, thereby aiming to prevent the onset of an allergic disease. Prebiotics are fermented in the large intestine encouraging the growth of beneficial bacteria, changes in short chain fatty acids (SCFA) production and stimulation of intestinal motility. Accumulating clinical evidence indicates that pre- and probiotics can have beneficial effects on infants at risk of, or living with allergies. Recent studies assessing probiotics in allergic children showed that probiotics support gut integrity and function. These results suggest that probiotic supplementation may stabilize the intestinal barrier function and decrease gastrointestinal symptoms in children with allergies such as CMA.

In recognition of the potential benefits of pre- and probiotics the WAO Guideline Panel suggested that pre- and probiotic supplementation be considered for infants at risk of allergy if not exclusively breastfed. There are commercially available partially hydrolyzed formulas containing probiotic oligosaccharides worldwide. Pre- and/or probiotics are now also available in some countries in hypoallergenic formula for the dietary management of infants with diagnosed CMA.

**Future of allergy management for CMA patients**

Given:

1. The aberrant gut microbiota associated with allergy and the key role of the gut microbiota on immune system maturation
2. The increasing clinical evidence for providing pre- and probiotics to infants
3. The lack of pre- and probiotic intake by infants with CMA on restricted exclusion diets

there is a strong rationale to supplement the diet of infants at risk of, or with CMA with pre-, pro-, or symbiotics. Nutricia has an extensive clinical trial programme underway investigating the role of these ingredients in the primary prevention and dietary management of CMA.

**What are prebiotics?**

A substrate that is selectively utilized by host micro-organisms conferring a health benefit.

**What are probiotics?**

Live micro-organisms which when administered in adequate amounts confer a health benefit on the host.

**What are synbiotics?**

A mixture of pre- and probiotics that affects the host by improving the survival and implantation of live microbial dietary supplements in the gastrointestinal tract, by selectively stimulating the growth and/or activating the metabolism of one or a limited number of health-promoting bacteria, and thus improving welfare.

**References:**

Good child health is the key to a healthier, more prosperous society – but as we move forward into 2019 and beyond, we need action from the government, at local level, and from parents themselves. With this joined-up approach, we will be well on our way to winning the race against childhood obesity, explains Dr Max Davie, Officer for Health Promotion at the Royal College of Paediatrics and Child Health.

Too much sugar can lead to tooth decay, with carbonated drinks, both sugar-free and those containing sugar, leading to enamel erosion. Research has also linked the high acidity of these drinks to incidence of dental carries. Nearly half of 15-year-olds have some form of tooth decay and the painful condition remains the number one reason why children aged five-to-nine are admitted to hospital, costing millions of pounds a year to treat, and putting them through the unnecessary stresses of surgery. Excess sugar also leads to obesity, and with a third of children overweight or obese by the time they leave primary school, helping families cut down on sugar needs to be a top priority. Failure to do so makes these children more likely to become overweight or obese adults, have children who are overweight themselves, and go on to develop serious preventable health conditions including type 2 diabetes, heart disease, and some cancers.

The food industry has already been challenged to cut 20 per cent of sugar from a range of products by 2020, and reduce sugar levels by at least five per cent in the first year. Businesses are encouraged to focus their efforts on their top selling products within 10 categories by reducing sugar levels, reducing the portion size, or encouraging consumers to purchase lower or no sugar alternatives. But the latest figures show that of the top 20 brands, only a third achieved any sugar content reduction – and worryingly 12 per cent increased the amount of sugar in their products. The five per cent reduction target for the first year has only been met by three food groups – breakfast cereals, sweet spreads and sauces, and yoghurts and fromage frais – so meeting the 20 per cent target by 2020 doesn’t seem achievable.

In June 2018, Public Health England warned that children in England had already consumed more than a year’s worth of sugar in just six months. They revealed that children aged between four and 10 were consuming on average 13 cubes of sugar a day, putting them on-track to consume around 4,800 cubes of sugar by the end of the year – that’s more than double the maximum recommendation.

How much sugar can my child eat? The government recommends that free or added sugars shouldn’t make up more than five per cent of the energy (calories) you get from food and drink each day. Children aged between four and six should have no more than five sugar cubes (19g); those aged between seven and 10 should have no more than six sugar cubes (24g); and children over the age of 11 should have no more than 11 cubes (30g). When a can of coke contains the equivalent of nine cubes of sugar, you can begin to see how easy it is for a child to reach and exceed their daily limit very quickly.

The main sources of sugar in children’s diets are sugary soft drinks which have more sugar than ice cream and puddings combined. Other main sources of sugar include coke, buns, pastries and cakes, biscuits, and sugary breakfast cereal and confectionary. These can be easy go-to items, but unfortunately the impact of enjoying too many of these items too often isn’t so enjoyable.

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Families can:

- Try swapping sugary snacks like cakes, biscuits, chocolate, and sweets for fruit, plain rice cakes, and toast, using lower fat spread
- Fruit juice and smoothies should be limited to a combined total of 150ml per day – but try swapping fizzy drinks for water, sugar-free, or no added sugar options where you can
- Brush their child’s teeth twice daily for two minutes at a time with fluoride toothpaste
- Ensure that their child visits the dentist by their first birthday

Nationally, the government has taken bold steps via the launch of its Childhood Obesity Strategy, and providing these policies are introduced, I am sure it will be easier for families to reduce the amount of sugar they consume.

Policies such as clear front of pack labelling and age restrictions on the sale of energy drinks will be vital. At a local level, Oral Health Community Champions should be adopted by all local authorities to help raise awareness of good oral health in the community.

We know that families living in deprived areas are more likely to fall victim to weight management issues and tooth decay. That’s why as a college, we are asking that in areas where there are significant oral health problems, children’s oral health should be prioritised in their health and wellbeing strategies.
TYPE 2 DIABETES: THE ROAD TO RISK REDUCTION

Diabetes prevalence is increasing rapidly and is now a global public health concern. It is estimated that over 3.7 million people in the UK are diagnosed with it. (1) In Northern Ireland 100,000 people have diabetes, of which 90 per cent have type 2 and 10 per cent have type 1, and in addition, another 12,000 people are estimated to be undiagnosed with type 2 (1), in which prevalence is reported at 5.7 per cent. Diabetes and its complications cost the NHS £400 million annually. (2) In fact, the costs of treating diabetes-related complications are particularly high and may account for up to 80 per cent of overall healthcare spend on the condition. (2) On behalf of the British Dietetic Association Northern Ireland Board, Alyson Hill, Lecturer in Dietetics at Ulster University, helps NIHR investigate the modes of intervention for type 2 diabetes, and how we can help pave a better future for our patients.

Alyson Hill
Type 2 diabetes is a life-long progressive disease, which if not identified and treated early, can increases people’s risk of serious complications, such as cardiovascular disease, nephropathy, and retinopathy. (2, 3) Type 2 diabetes is commonly an asymptomatic condition and up to 50 per cent of people have already developed complications of macrovascular and microvascular complications at the time of diagnosis. (4) The life-expectancy of someone with type 2 diabetes is approximately six years less than with someone without diabetes. (5) Preventing or delaying diabetes complications is prudent, and therefore identifying those at risk of diabetes is an important strategy.

Pre-diabetes is a term used to describe people who have an increased risk of developing type 2 diabetes because they have impaired glucose metabolism. Their blood concentration of glucose or glycated haemoglobin lies above the normal range, but below the threshold defined for diagnosis of diabetes. Pre-diabetes is therefore an umbrella term for impaired fasting glycaemia (IFG) and impaired glucose tolerance (IGT). (6) IFG is defined by the World Health Organisation (WHO) as a fasting plasma glucose of >6.1mmol/L, while IGT is a glucose concentration of 7.8-11.0mmol/L two hours after a 75g oral glucose tolerance test. (7) Pre-diabetes is a term which was endorsed by the American Diabetes Association (6), but has not been accepted by the WHO (7) and NICE (3) as it implies inevitable progression to diabetes.

While there are no strategies to prevent type 1 diabetes, 80 per cent of type 2 diabetes cases can be prevented or the onset delayed. (8) Being overweight or obese is the most significant risk factor for developing type 2 diabetes (9), and recent figures show that the numbers are increasing, with 64 per cent of adults in Northern Ireland either overweight (37 per cent) or obese (27 per cent). (10) Lifestyle choices, in particular dietary habits and physical activity, are potentially modifiable, however other risk factors such as ethnicity, age, or family history are not modifiable. Therefore, identifying people at increased risk of developing diabetes is recommended by NICE (3), with onward referral to evidence-based lifestyle interventions to reduce their risk. Such high risk individuals should be encouraged to undertake a simple risk assessment using a validated risk assessment tool, such as the Diabetes UK Risk Score. (11) Then those with a moderate-to-high risk score should undertake a blood test to confirm the condition. (3)

Evidence from randomised controlled trials in people at high risk indicates that intensive multicomponent lifestyle interventions, incorporating diet and physical activity with sustained weight loss can prevent type 2 diabetes. (12, 13, 14, 15, 16) Prevention trials have adopted strategies incorporating diet and physical activity, or a combination of these, however there is a lack of evidence to support one approach over another. (17) Increasing activity with moderate intensity activity, such as brisk walking for at least 30 minutes / day or 150 minutes / week, is associated with reduced risk and is an effective tool in improving health and maintaining weight loss. (18) A diet restricted in energy intake, low in total and saturated fats and high in fibre is recommended to aid weight loss. The effect of other dietary approaches to promote weight loss is uncertain as there is a lack of robust evidence to support diet approaches such as low carbohydrate, Mediterranean dietary pattern, intermittent fasting. (19)
Current guidelines for the prevention of type 2 diabetes in people at high risk are based around achieving moderate weight loss (five-to-seven per cent weight loss) and reduce relative risk of type 2 diabetes by 50 per cent. (20) Every kilogram lost is associated with a 16 per cent reduction in risk (21), and losses of 10 per cent may be sufficient to reduce the risk of future type 2 diabetes by 80 per cent. (22) Overall weight loss is the primary driver of type 2 risk reduction. (9) Intensive lifestyle intervention has proved effective in preventing type 2 diabetes among high risk individuals in clinical trials, with short-term (~three years) relative risk reductions of 50-to-60 per cent and 30-to-40 per cent long-term relative risk reductions (seven-to-20 years), two-to-six however remains a challenge to integrate within routine clinical care.

Quality assured intensive lifestyle change programmes for those at high risk (3) have been recently implemented in some parts of the UK. However, these have not been established in Northern Ireland at present. As the numbers of people with diabetes continue to rise, early intervention to avoid or delay the diagnosis is vital. Therefore, appropriately trained and competent practitioners with relevant nutritional knowledge and skills, for example registered dietitians (Health and Care Professions Council), or aligned with, for example, Association for Nutrition (23), are required to educate and support people make lifestyle choices to reduce their risk of diabetes.

modification is the most effective tool in the prevention or delay of type 2 diabetes. Identifying those at high risk is essential to provide education on appropriate lifestyle behaviours to reduce the incidence of type 2 diabetes.

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RATHVIEW MEWS RECOVERY AND REHABILITATION UNIT OPENS

Service users in the Western Health & Social Care Trust can now avail of first-class recovery and rehabilitation services following the opening of Rathview Mews on the Drumnakilly Road, Omagh, which will provide support to people who have difficulty living independently due to severe and enduring mental illness and related difficulties.

The facility features 12 individual self-contained flats providing transition for service users who require higher levels of support, rather than care, as they progress along their road to recovery and independence.

The announcement is in line with the trust’s recognition that in order to provide a modern and responsive service to people with mental illness, it must consider delivery of services across a variety of settings. Providing community facilities that are designed to meet the needs of service users will thus promote greater choice and further support recovery and rehabilitation as alternatives to long-term inpatient care.

Speaking about the opening of the new unit, Chairman of the Western Health & Social Care Trust, Niall Birthistle, said, ‘This marvellous new facility marks another step in the long-term plans for mental health services across the Western Trust. It has been designed in conjunction with service users and carers to make sure it meets their needs. I would like to thank them for the very important part they have played in the design of the unit.’

Director of Adult Mental Health and Learning Disability Services, Karen O’Brien, added, ‘This new service aims to help people with mental health problems move forward, set new goals, and develop relationships that gives their lives meaning. Recovery emphasises that, while people may not have full control over their symptoms, they can have full control over their lives. Mental illness and social attitudes to mental illness often impose limits on people who are experiencing ill health. Recovery is about looking beyond those limits to help people achieve their own goals and aspirations.’

ARTIFICIAL INTELLIGENCE AIMING TO DECODE HEART ATTACK AND STROKE RISK

Scientists are developing a machine-learning tool to predict which people are likely to suffer a life-threatening heart attack or stroke, thanks to new joint funding awarded by the British Heart Foundation and the Alan Turing Institute.

Once developed, the artificial intelligence tool will help predict people’s risk based on their health record; therefore possessing the potential to transform the way in which GPs identify, treat, and advise at-risk patients.

The comprehensive insight gained is clear in that the algorithm will take account of people’s historical medical records, and map past trends in each individual’s health to generate the most accurate personalised risk score possible. It will also separate and classify the risk for each type of heart and circulatory disease, such as stroke or heart disease, rather than giving a general risk score.

Delving into the landscape of possibilities which the research is presenting, Professor Metin Avkiran, Associate Medical Director at the British Heart Foundation, commented, ‘More people than ever are living with the devastating aftermath of a heart attack or stroke. Investing in data science and machine-learning innovation is critical if we want to reduce the burden of early deaths and unnecessarily suffering from heart and circulatory disease.

‘Data science is set to accelerate breakthroughs in medical research and the outcome of projects such as this could ultimately transform care for millions of people living under the shadow of heart and circulatory disease in the UK.’
For patients, their ensuing cancer diagnosis journey is dotted with an array of lifestyle changes – and their dietary habits require particular focus. Be it during the treatment process itself, or to help reduce the disease’s chances of recurrence, it’s vital that the individual’s body is being nourished with the necessary nutrients. Advice is at hand courtesy of Dietitian and Nutritionist, Andrea Davis, from Cancer Nutrition, who overviews how, and why, inadequate intake must be avoided.

Giving up smoking is the most important lifestyle change which someone can make to reduce their risk of cancer, then maintaining a healthy weight. The World Cancer Research Fund UK (WCRF UK) has produced 10 recommendations on dietary changes that people can make to reduce their risk of developing cancer. This is in addition to avoiding smoking and excess sun.

Cancer survivors can also follow this advice to reduce the risk of recurrence and other chronic health conditions, such as diabetes or heart disease.

Further practical advice is available from the WCRF UK website by visiting www.wcrf-uk.org.

Andrea Davis

Cancer is a disease that occurs when abnormal cells grow beyond their usual boundaries that can then invade adjoining parts of the body and spread to other organs. There are more than 200 different types of cancer (1), with it being the second leading cause of death globally, accounting for 9.6 million deaths in 2018, and this number is increasing. (2) Many people may be surprised to learn that one-in-two people in the UK will be diagnosed with cancer at some point in their lives. However, 50 per cent of people affected by cancer now survive for 10 years or longer. (1)

Nutrition plays a vital role in preventing the development of cancer in the first place, but also during cancer treatment and reducing the risk of cancer recurrence afterwards. It is estimated that a third of the most common cancers could be prevented by:

- Eating a healthy diet
- Increasing the physical activity we do
- Maintaining a healthy weight
It is important to eat well and have a good nutritional intake during cancer treatment also. Good nutrition helps to improve tolerance to treatment, helps to maintain weight, muscle function and energy level, and aids recovery and the body's ability to fight infections.

Malnutrition is defined as a deficiency of nutrients such as energy, protein, vitamins, or minerals which causes measurable adverse effects on body composition, function, or clinical outcome. (3)

Cancer patients may be malnourished at diagnosis or become malnourished as a result of the disease process and its treatment. In general, around 60 per cent of people affected by cancer are malnourished. (4) Its prevalence increases further in those with cancer of the gastrointestinal tract where around 80- to 85 per cent of people with pancreatic cancer, 80 per cent with oesophageal cancer, and 72 per cent with head and neck cancer are malnourished. (5, 6, 7) This is due to increased difficulties with eating, swallowing, digesting, and absorbing food due to the location of the tumour.

The side-effects of cancer treatment can also worsen these nutritional problems. Approximately 65 per cent of patients with cancer experience some nutritional problems, and up to 90 per cent of patients with advanced cancer suffer from anorexia.

Other common side-effects of treatment, resulting in a reduced food intake and worse nutritional status, include:

- Constipation – 14 per cent
- Vomiting – 11 per cent
- Diarrhoea – 14 per cent
- Swallowing difficulties – nine per cent
- Smells – seven per cent
- Mouth sores – one per cent
- No appetite – 38 per cent
- Early satiety – 27 per cent
- Pain – 23 per cent
- Taste change – 20 per cent
- Nausea – 19 per cent
- Dry mouth – 17 per cent

Unfortunately, cancer-related weight loss can’t be simply defined as malnutrition.

It’s been stated that, ‘Cancer cachexia is a multi-factorial syndrome defined by an ongoing loss of skeletal muscle mass (with or without loss of fat mass) that cannot be fully reversed by conventional nutritional support and leads to progressive functional impairment. The pathophysiology is characterised by a negative protein and energy balance driven by a variable combination of reduced food intake and abnormal metabolism.’ (9)

When a patient develops cancer cachexia, they have an abnormal metabolism due to an elevated resting metabolic rate, insulin resistance, lipolysis, and proteolysis which aggravates weight loss further and is provoked by systemic inflammation and catabolic factors. These may be host or tumour-derived. (8) Weight loss, impaired physical performance, and systemic inflammation in cancer patients are all independently associated with a poorer prognosis, increased toxicity to cancer treatments, and a reduced quality of life. (10, 11) In advanced cachexia, it is no longer possible to prevent weight loss due to very advanced or rapidly progressive cancer which is unresponsive to cancer treatment. At this stage, the aim is to minimise further weight loss, and the burden and risks of artificial nutritional support will likely outweigh any potential benefit. A multimodal approach focussing on symptom control, appetite stimulation, and nutritional counselling is best to manage this.

Oncology specialist dietitians work closely with other members of the multidisciplinary team to provide evidence-based, expert advice to cancer patients on how they can optimise their nutritional wellbeing and quality of life. We provide nutritional counselling to patients and their families / carers at any stage of their cancer treatment and rehabilitation. This includes providing practical information on foods to choose, portion sizes, and meal patterns which is tailored to the person's treatment and symptoms. This leaflet from the WCRF UK provides practical tips on how to eat well and manage side-effects of cancer treatment: www.wcrf-uk.org/sites/default/files/Eat-well-during-cancer.pdf.

We also advise on when artificial nutrition, such as oral nutritional supplement drinks, enteral nutrition, or parenteral nutrition is appropriate to meet a patient’s nutritional goal. Sometimes the prophylactic placement of feeding tubes will be arranged before cancer treatment starts if significant side-effects are expected which will impact on the person’s ability to eat and drink sufficiently. Ideally, every cancer patient should be undergoing regular nutritional screening (for example, using the Malnutrition Universal Screening Tool) and referred to an oncology dietitian when they are at risk of malnutrition for advice and support to ensure that they can tolerate their cancer treatment as well as possible.

For more information, contact Andrea Davis at Cancer Nutrition via the details below:
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- Website: www.cancernutrition.co.uk

REFERENCES
Fresenius Kabi
Providing a Nutrition Solution to help your Oncology patients’ needs

Why Fresenius Kabi?
Fresenius Kabi is the only company, in Ireland, to provide both Enteral and Parenteral solutions.

Fresenius Kabi Enteral & Parenteral Solutions

Fresubin Oral Nutritional Supplements    Fresubin Tube Feeds    Parenteral Solutions

Both the Enteral and Parenteral portfolio’s contain options that supply omega-3 fatty acids/fish oil.

If you would like to order samples, enteral products only, please log on to www.fresubinsamples.ie

Date of preparation: January 2019
Adverse events should be reported. Reporting forms and information can be found at http://yellowcard.mhra.gov.uk.
Adverse events should also be reported to Fresenius Kabi Limited. Email pharmacovigilance.GB@fresenius-kabi.com

Prescribing information can be found overleaf.
A MILESTONE MOMENT

As Cancer Focus Northern Ireland marks 50 years of mobilising support and raising much-needed funds, get the lowdown on the charity’s birthday plans.

Debra Rice, cancer survivor, Roisin Foster, Cancer Focus Northern Ireland’s Chief Executive, and Donald Harte, care service user, at the launch of the charity’s 50th birthday celebrations

Leading local charity Cancer Focus Northern Ireland has launched a major fundraising campaign to raise £100,000 for pioneering breast cancer research marks its 50th birthday.

Speaking at the charity’s 50th anniversary launch event, charity patron TV personality, Rose Neill, shed a light on what the charity's pinnacle anniversary means, saying, ‘I am delighted to support Cancer Focus Northern Ireland during this very special year. We all know someone who has been affected by this devastating disease. Cancer Focus Northern Ireland does fantastic work funding research, supporting those with cancer, and helping us all to reduce our risk of getting cancer in the future.

‘Over the years research has led to better diagnostics and treatments, and more people are surviving cancer than ever before. But there is still so much to learn and more research is vital. Please support this important appeal and help the generations to come.’

The new research project based at Queen’s University Belfast will study women who have developed cancer in their second breast, and aims to devise a test to identify women who are at greatest risk of developing a second breast cancer. The results will help women avoid unnecessary breast surgery, receive the best, personalised treatment for their cancer, and help save lives.

Cancer Focus Northern Ireland – originally entitled the Ulster Cancer Foundation – is ingrained with a long history of funding cutting-edge research in local universities, as well as caring for patients and their families, working in cancer prevention in the community, and advocating for better health policies.

‘We are delighted to reach this 50-year milestone. We were the first cancer charity to be set up in Northern Ireland and have supported many thousands of local people since then. ‘Our charity initially started with the aim of funding locally-based research into cancer and we are proud to say that we are carrying on with that tradition. We are calling on everyone to come on-board and help us continue to help people for the next 50 years.’

During the year there will be a number of events to highlight the charity’s birthday.

Fresenius Kabi, caring for life

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AN UNCERTAIN FUTURE

Brexit has huge implications for health and social care – some potentially catastrophic – but despite this there has been very little debate about these issues. In her new column, Nora Smith, Chief Executive of CO3, details the trials which lie before us due to a lack of transparency, and why they must be addressed now.

One of the most pressing Brexit matters is the impact on the workforce. We are already suffering from serious shortages – both of nurses and social care professionals. The crisis in social care is especially acute.

Social care is the bedrock on which the entire health system rests. If it’s not able to recruit staff, it can’t relieve pressures on acute services by providing support to those who are able to leave hospital, but not well enough to live completely independent lives. This causes ‘bed blocking’, seizing up hospitals. Currently there are between 3.5 per cent and 7.5 per cent vacancies in the social care sector. Some of this shortfall is made up by deploying agency staff at much higher rates.

There is also a heavy dependency on staff from other European countries. Across the UK there are more than 100,000 care workers from European Union (EU) countries. Those already here will be able to remain, but there is doubt as to whether we will be able to recruit any more to fill the growing vacancies.

THIS IS FOR TWO REASONS

The first is that the Home Secretary’s proposed new policy for immigration post-Brexit prioritises highly-skilled workers – but instead of assessing immigrants by their skills, it sets a threshold of £30,000 per annum salary. This excludes care workers. They are skilled, but their salaries average around £16,000 per annum.

The second relates specifically to Northern Ireland. The minimum wage and terms and conditions in the Republic are higher, making Northern Ireland a particularly unattractive place to come and work in the care sector. To compound all this we don’t have a government and so are unable to enact the reforms laid out in Power to People, the Expert Panel Review of Adult Social Care, which calls for fairer remuneration for social care professionals.

Urgent consideration is required if Northern Ireland is to achieve a secure future for adult social care. To compound matters the need for more staff will grow over time. There are 10,000 people living in residential homes, and 23,000 receiving care in their own homes. The government’s statistical agency estimates that this need will grow by 15 per cent in the next two years.

At the same time the Royal College of Nursing tells us that half of all nurses in the health system are within 10 years of being eligible for early retirement.
WHAT'S NEXT FOR RESEARCH?
Another cause for concern is the impact which Brexit will have on research. The UK is a world leader in this field. For example, the British Heart Foundation (BHF) has been a cornerstone of the UK’s research into cardiovascular problems since it was founded in 1961. Some of its key breakthroughs include the discovery of the link between blood clots and heart attacks; mapping the anatomy of baby heart defects; and helping to develop techniques which have reduced the number of children dying from congenital heart disease by more than 80 per cent over the last three decades.

The BHF has strong links here. It provided a grant to Professor Frank Pantridge, a Hillsborough man and Queen’s University Belfast academic, who in 1965 invented the portable defibrillator which has since saved millions of lives.

On a recent visit to Northern Ireland its Chief Executive, Simon Gillespie, expressed his concerns. These centred around failure to attract the best researchers from overseas, a reduction in funding and associated uncertainty about planning, and a divergence in regulations harming collaboration with other nations.

Without the right measures from government, patients could be left without access to cutting-edge clinical trials and waiting longer for new treatments that are freely available in the rest of Europe.

One concern is that if it becomes more difficult for UK researchers to work in Europe, that would not just be harmful for their personal development, but also undermine the international collaboration that lies at the heart of all medical research.

Researchers from EU nations are leaving the UK. Thousands have departed since 2016 and the Russell Group of universities reports a three per cent drop in applications from EU students this year.

The BHF does not get any funding from the EU, but many of the institutions that it supports do, so unless EU funding streams are replaced that could make projects unviable.

In the referendum debate there was much mention of the UK being a net contributor to Europe, but in the case of medical research it is a beneficiary, So to continue at the same level would require Westminster government providing an extra €600-to-€800 million per annum.

WHAT ABOUT REGULATIONS?
On top of this we are yet to get clarity as to which EU regulations will continue to be adopted when Brexit occurs: for example, regulation of medicines and of medical standards across Europe.

It’s imperative that there is no deviation. Today clinical research is typically carried out on an international basis, so therefore unless all parties are working to identical procedures the resulting data sets have to be compatible. If they are not UK patients could find themselves being excluded from clinical trials.

There is a similar issue with the regulation of medicines. Currently there is one regime that applies across the UK. If the UK chooses to deviate in future this could delay access to important new medicines. This is because the pharmaceutical companies will want to ensure compliance with the rules of the larger market first.

A CALL TO ATTENTION
All charitable organisations involved in health and social care are wrestling with the uncertainties that would arise from a no-deal Brexit – yet none have the resources to stockpile essential equipment and medicines.

This is a serious matter. For example, there is no UK-based manufacturer of incontinence pads; specialist beds are also made in the EU zone; and there are uncertainties around the supply of medicines. It is not scare-mongering to point this out. It would be irresponsible not to ensure that whatever scenario we face does not endanger patients.

Charities are non-political organisations; they work in a wide variety of fields. Many in Northern Ireland are concerned with health, mental health, and social care, and what they have in common is that they have a charitable purpose for the public benefit. All our members are working for the public good. As such they have legitimate concerns about Brexit and the many uncertainties that surround it.

Late last year a poll of charity chief executives saw 90 per cent preferring Prime Minister May’s draft deal to a no-deal Brexit. There was also a clear majority for a fresh referendum.

These results demonstrate the mounting sense of alarm within the charitable sector at the prospect of a no-deal Brexit.

The fears arise from deep concern about the impact Brexit will have on the most vulnerable people in society. It is vital that health issues figure much higher on the agenda in the days and weeks to come.
Accidental bowel leakage, also commonly known as faecal incontinence, is the accidental passing of bowel movements, including solid or liquid stools or a mucus discharge from the anus. The condition can be upsetting – with many people too ashamed to discuss this with anyone, including their healthcare professionals. Sparked by the levels of distress imposed on patients, co-authors Ravi Karwa and Anurag Agrawal, Medical Adviser to The IBS Network, from the Department of Gastroenterology, Doncaster and Bassetlaw Teaching Hospitals, depict how open discussion with the doctor is important to diagnose and manage the condition, in addition to the avenues which should be considered for elevating care.

**How Common Is Accidental Bowel Leakage And What Are The Predisposing Conditions?**

It is a common condition, with approximately 500,000 people in the UK affected. The prevalence rises significantly in older individuals, with nearly one-in-40 sufferers above the age of 65. Adults who are in nursing homes are especially vulnerable, with over 50 per cent prevalence.

Patients with faecal incontinence may also have other health problems, including diarrhoea, chronic conditions, such as irritable bowel syndrome (IBS), diabetes, a history of gall bladder surgery, damage or weakness of the muscles or nerves of pelvic floor, anus or rectum, or inflammatory bowel diseases (IBD), such as proctitis.

A difficult childbirth with a history of instrumentation during labour can also predispose to this condition, along with local conditions such as haemorrhoids or prolapsed bowel.

Factors which are particularly liable to cause accidental bowel leakage include constipation wherein passage of large hard stools over a period of time can stretch and weaken the muscles in the rectum and anal canal. This leads to a build-up of watery stools that accumulates behind the solid stools.

Nerve damage due to brain or spinal cord injury or neurological conditions, such as dementia, Parkinson’s disease, stroke, and Multiple Sclerosis can all affect the nerves supplying the pelvic floor, leading to incontinence.
SYMPTOMS OF Faecal INCONTINENCE AND WHEN TO SEEK MEDICAL ADVICE

Faecal incontinence can be associated with the urge to open the bowels, but there is a loss of control with leakage occurring before getting to the toilet. Alternatively, accidental bowel leakage can be passive wherein stool or mucus can be passed without the individual being aware.

The decision to seek advice from a GP is personal and is dependent at least in part on the severity of symptoms, as well as the individual’s ability to cope with these distressing symptoms. It is common for individuals to seek medical help due to the emotional and social distress that associates with this problem.

CLINICAL ASSESSMENT AND INVESTIGATIONS

A detailed history, including the onset and severity of symptoms, active or passive leakage, obstetric history, and associated symptoms of diarrhoea or constipation, should be taken. In addition, any other medical conditions, such as IBS or IBD, neurological and postsurgical conditions, the impact of the condition on quality of life, and any red flag symptoms.

Examination should include a rectal exam to assess for associated conditions such as faecal impaction and any other structural problems such as haemorrhoids or a prolapsed bowel. In selected patients a bimanual examination for assessment of pelvic conditions such as rectocele is also undertaken.

Investigations should be tailored to the individual and include blood tests and stool tests, as well as an endoscopic or radiological evaluation to rule out inflammatory and any other structural cause of the symptoms. Physiological tests such as ano-rectal manometry, defaecography or electromyography may be necessary in some instances to assess the function of the rectal bowel as well as the pelvic musculature. Endo-anal ultrasound for assessment of the internal and external anal sphincter, as well as magnetic resonance imaging, may also be required in selected individuals.

MANAGEMENT OF ACCIDENTAL BOWEL LEAKAGE

There are several management approaches; these include medical, dietary, an alternative therapeutic approach, or surgery. The success rate is variable, although up to 60 per cent of individuals will respond to medical or dietary treatment and therefore this remains the first line of approach.

The anal discomfort with irritation, itching, or pain that accompanies accidental bowel leakage can be managed by keeping the area dry and clean after a bowel movement, changing soiled underwear, using moisture barrier cream, and wearing absorbent pads.

Depending on the cause, if accidental bowel leakage associates with diarrhoea, over-the-counter medicines, such as loperamide, can help relieve, not just diarrhoea, but also incontinence, as they have some added beneficial effect on improving the anal sphincter tone.

If constipation is the cause, laxatives or stool softeners, such as docusate, can be tried. Laxative combinations, such as a stimulant and a stool softener, can be considered for resistant symptoms and where the constipation is due to a pelvic floor disorder, a suppository, such as Bisacodyl or Glycerine, may be considered. Management of associated conditions, such as IBS or IBD, may be necessary in some patients before considering anti-diarrhoeal or laxatives.

Bowel training by encouraging patients to try to open their bowels, e.g. after meals, and daily pelvic floor exercises; tightening and relaxing bowel muscles several times, help strengthen muscles and are a positive therapeutic approach. Biofeedback is augmented muscle strengthening of the pelvic muscles with the assistance of devices.

During biofeedback a balloon is placed in the rectum, and is progressively distended until there is a sensation of rectal filling. Successively smaller volume re-inflations of the balloon aim to help the person detect rectal distension at a lower threshold, giving more time to contract the external anal sphincter and prevent incontinence. On the other hand, in those with urge incontinence / rectal hypersensitivity, training is aimed at teaching the person to tolerate progressively larger volumes.

Surgery can be considered if symptoms are severely debilitating, and medical, dietary, and alternative approaches have not been helpful. This is needed only in a handful of patients and the principles include surgical management of associated conditions such as prolapse or haemorrhoidal banding or ligation. Very occasionally sphincter repair procedures, sacral nerve stimulation, or in extreme cases, a colostomy may have to be considered.

ABOUT THE IBS NETWORK CHARITY

The IBS Network is the national charity that helps people with IBS and has provided support to those with the condition and to healthcare professionals for over 26 years. Funding for the charity is received from a number of sources, including annual memberships, an online shop for purchasing the Can’t Wait card, radar keys, and other useful aids. The charity receives no funding from the government or NHS and relies wholly on donations.

Members of the charity’s community can gain access to a whole range of services from just £2 / month, including the IBS Self-Care Programme, a specialist IBS nurse helpline, individual advice from healthcare professionals, a growing network of support groups, an online forum, plus factsheets, research, and updates via the charity’s magazines, email newsletters, and other supporting material.

ABOUT IBS

At any one time, IBS affects between 10-to-20 per cent of people living in the UK, which equates to approximately 12 million people. IBS is a chronic, long-standing illness consisting of frequent abdominal discomfort and bowel symptoms that can’t be explained by any other disease. Symptoms can be complex and conflicting and may include one or a combination of constipation, diarrhoea, abdominal cramps, and pain, bloating, changes in bowel movement, and frustrated defaecation. It can lead to feelings of isolation and cause major problems in people’s working and personal lives.

For more information, or to become a member, get in touch via the following contact details:

Email: info@theibsnetwork.org
Tel: 0114 272 3253
Website: www.theibsnetwork.org
Twitter: www.twitter.com/IBSNetwork
Facebook: www.facebook.com/TheIBSNetwork
LinkedIn: www.linkedin.com/company-beta/4601772
Address: The IBS Network, Unit 1.16 SOAR Works, 14 Knutton Road, Sheffield, S5 9NU

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BREAKING BARRIERS AND ENSURING DIGNITY

Debbie Gordon is a Chartered Physiotherapist with a specialist interest in bowel dysfunction. Debbie has worked in the NHS, private practice, and industry – resulting in her deep understanding of the issues faced by patients trying to manage their symptoms. Debbie is passionate about raising awareness and ensuring that the right levels of care are accessed at the right time.

Faecal incontinence, commonly referred to as accidental bowel leakage, is a debilitating symptom that significantly impacts both quality of life and general health.

NICE guidance CG 49: Faecal Incontinence in Adults – Management confirms that the current epidemiological information shows that between one per cent and 10 per cent of adults are affected with faecal incontinence, depending on the definition and frequency of faecal incontinence used.

It is likely that 0.5-to-one per cent of adults experience regular faecal incontinence that affects their quality of life.

Understandably, faecal incontinence remains a largely hidden problem, with many patients hiding their symptoms from close family and friends.

Faecal incontinence is a socially stigmatising condition, and so healthcare professionals are encouraged to actively yet sensitively enquire about symptoms in high risk groups.

For some, conservative management will provide resolution of symptoms, while others will develop a long-term management plan or progress to surgery.

HIGH RISK GROUPS

• Frail older people
• People with loose stools or diarrhoea from any cause
• Women following childbirth (especially following third- and fourth-degree obstetric injury)
• People with neurological or spinal disease / injury (for example, spina bifida, stroke, Multiple Sclerosis, spinal cord injury)
• People with severe cognitive impairment
• People with urinary incontinence
• People with pelvic organ prolapse and / or rectal prolapse
• People who have had colonic resection or anal surgery
• People who have undergone pelvic radiotherapy
• People with perianal soreness, itching, or pain
• People with learning disabilities

GOOD PRACTICE IN MANAGING FAECAL INCONTINENCE

People who report, or are reported to have, faecal incontinence should be directed to healthcare professionals who have the relevant skills, training, and experience, and who work within an integrated continence service.

CONSERVATIVE MANAGEMENT SHOULD INCLUDE THE FOLLOWING:

• Disposable body-worn pads in a choice of styles and designs, and disposable bed pads if needed
• Pads in quantities sufficient for the individual’s continence needs – it’s inappropriate to limit the number of pads given
• Anal inserts / plugs – single-use medical devices that prevent leakage
• Skincare advice that covers both cleansing and barrier products
• Advice on odour control and laundry needs
• Disposable gloves

EMPOWERING PATIENTS

Pharmacists are ideally placed to support and educate and, in line with NICE CG49, should offer people with faecal incontinence advice on coping strategies, including:

• The use of continence products and information about product choice, supply sources, and use
• Where to get emotional and psychological support, including counselling or psychological therapy, where appropriate, to foster acceptance and positive attitudes
• Links to charities and groups that can provide support and strategies, such as planning routes for travel, to facilitate access to public conveniences, carrying a toilet access card or RADAR key to allow access to ‘disabled’ toilets

PROFESSIONAL SUPPORT CAN BE OBTAINED FROM THE FOLLOWING GROUPS:

• Pelvic Obstetric & Gynaecological Physiotherapists (POGP) – www.pogp.csp.org.uk
• Association of Continence Advisors (ACA) – www.aca.uk.com

REFERENCE

NICE guidance CG 49: Faecal Incontinence in Adults – Management
It’s been eighteen years since Nicola, a mother of three, first experienced symptoms of Accidental Bowel Leakage (ABL) – a form of bowel incontinence that affects thousands of men and women of all ages in the UK.

‘It was slight to start,’ she says. ‘I first noticed if I ate anything acidic, or if I was abroad and it was very hot. Then it gradually got worse as the years went on.’

Like many people who suffer from ABL, Nicola was embarrassed about the problem and initially found her own ways to manage – always leaving home with a bag full of panty-liners and spare underwear as a ‘just in case’.

‘At times it was very, very difficult,’ she says. ‘I used to dread going away, eating different foods. You just didn’t know when it was going to happen. I wore dark underwear, dark trousers. I daren’t go out in white trousers or white shorts.’

When she eventually sought medical help, Nicola was diagnosed with a weak anal sphincter. Though she was offered a form of treatment, getting to the hospital proved difficult – especially as she was also coping with the recent loss of her husband. ‘I had so much to contend with,’ she says. ‘It was just a nightmare.’

Everything changed three years ago when Nicola came across a small advert for Renew Inserts in her newspaper. ‘It was by pure chance,’ she laughs, ‘because I never look at adverts.’ After phoning the Freephone number and speaking to a Renew advisor, she decided to order a free sample: ‘I thought, what have I got to lose?’

Renew Inserts are clinically-tested product that helps to prevent involuntary bowel leakage. Made from soft, supple silicone that adapts to your body for a comfortable fit, the inserts are safe to wear day and night, and come with a hygienic fingertip applicator.

For Nicola, the transformation was immediate. Without the fear of an ‘embarrassing accident’ she was finally able to return to the things she loves. ‘I do ballroom dancing, I do dance aerobics, I swim, I walk, I can do anything,’ she beams. ‘Even wearing white trousers and white shorts, which is something I haven’t been able to do for donkey’s years!’

Though she doesn’t require one every day, Nicola makes sure she’s always got a Renew Insert in her handbag – she laughs at how it’s a lot more discreet than the panty-liners and spare underwear she used to carry.

I believe that Renew Inserts have done for ABL what tampons did for periods. ‘They set you free,’ she says. ‘You can wear what you like, eat what you like and do what you like, whenever you like. I look forward to things again.’

Do you suffer from Accidental Bowel Leakage (ABL)?

- You have episodes of soiling yourself, sometimes without even realising you needed the toilet
- You experience these episodes frequently or from time to time (not just a one-off)
- The fear of an embarrassing episode prevents you from enjoying a normal, active life

Visit: [www.renew-medical.uk](http://www.renew-medical.uk)

Or call: 0800 542 0814
EPILEPSY: UNDERSTANDING THE UNEXPECTED

It doesn’t take much to appreciate the burgeoning need for a revolution in the field of epilepsy. The statistics relating to the condition speak for themselves – more than half a million people in the UK live with it, but for at least one-third of those people, their seizures will not be controlled with current treatments. Aiming to address this gulf, Epilepsy Society are taking on cutting-edge techniques to help us understand the causes of a neurological condition that has baffled medics for thousands of years. In this issue, they catch us up on their efforts, and the hope that genomic diagnosis will become integral to routine practice in the NHS for everyone with epilepsy.

EPILEPSY: UNDERSTANDING THE UNEXPECTED

MRI AND EPILEPSY

More than 20 years ago we led the way using magnetic resonance imaging (MRI) in the diagnosis of epilepsy, investing in the country’s only MRI scanner dedicated to the condition. This enabled doctors to look deep inside the brain in order to identify structural anomalies that could be the cause of a person’s seizures.

Initially this was only available for those with the most severe forms of epilepsy. Today MRI is part of routine practice across the NHS for the diagnosis of all people with epilepsy. As well as directing diagnosis and treatment, it has led to many people undergoing safe and life-changing brain surgery for their seizures – the closest we can get at the moment to a cure for epilepsy.

Now, scientists at the charity are working in partnership with University College London and University College London Hospital to carry out ground-breaking genomic research which they believe could further enhance our current understanding of the genetic landscape of different types of epilepsies. And they hope that genomic diagnosis, based on a person’s DNA, will trail a similar blaze to MRI and become part of routine practice across the NHS for all people with epilepsy.

THE CURRENT LANDSCAPE OF TREATMENT

In the last 100 years the number of medications available to treat epilepsy has increased to more than 26, with newer drugs tending to be better tolerated and causing fewer side-effects. However, doctors can still only prescribe based on the best evidence available, and for many people, a diagnosis of epilepsy means an odyssey of multiple different drugs in different combinations, and at varying doses before the optimum treatment is found.

Our goal is to achieve the right drug at the right dose from the point of diagnosis, but the current reality is very different, and the need for more individualised treatments screams loud and clear. This is where we hope that pioneering genomic research at Epilepsy Society, University College London, and University College London Hospitals NHS Foundation Trust, will make the difference, bringing hope for up to 200,000 people in the UK with drug-resistant epilepsy.

A PERSONALISED DIAGNOSIS

We believe that genomics is the missing element in the toolkit required for the diagnosis of the type of epilepsy and personal treatment for each type of epilepsy.

We know that sequencing and analysing all three billion letters of a person’s genetic code can tell us more about a person’s epilepsy than any other single technique. And this is pivotal. Not only do we hope that it will enable us to determine the cause of their seizures, but it will also help us to predict their response to anti-epileptic medication and their susceptibility to Sudden Unexpected Death in Epilepsy.

We have already established an innovative epilepsy genomics clinic at our Chalfont Centre in Buckinghamshire, where we see and diagnose people who are thought to have an underlying genetic cause for their epilepsy.

The clinic has been running for more than a year, investigating individual genetic pre-disposition to epilepsy, and then trying to shape its treatments for the individual. It also provides the opportunity to counsel patients and their families where there may be a chance of other family members being affected, or of children having similar difficulties. And it ties in closely with the research which we are doing into the epilepsies.

Genetic diagnosis can lead to a change in
medication, diet, or supplements, although in some cases we don’t yet have the required knowledge to redirect treatment. This is where we hope that our research will enhance our knowledge of the underlying genetic architecture of epilepsy, leading to better treatments for more people.

WHAT IS GENOMICS?

Initially we began by sequencing just a small part of the DNA at Epilepsy Society, focussing on the exome, or 10 million letters that carry the most significant sequences of DNA – those that direct the body to make proteins essential for it to function.

This has helped us to make progress in recognising epilepsy syndromes, defining them genetically and understanding them biologically. Now we are looking at the whole genome in order to increase our understanding and identify risk factors and therapeutic markers which could potentially lead to the development of new medications.

Alongside sequencing, we are using some of the most sophisticated equipment to help analyse genetic data. 3D stereo photogrammetry is helping to demonstrate how a genetic contribution to epilepsy can have a subtle, but significant, impact on facial structure, and in turn help us to understand an individual’s genome; optical coherence tomography can show the impact of epilepsy on the thickness of the retinal fibres at the back of the eyes; and transcranial magnetic stimulation is helping to analyse brain activity without the need for electrodes or needles.

Our translational research programme has already begun sequencing 5,000 genomes and is currently focussing on more severe forms of epilepsy characterised by uncontrolled seizures and issues such as learning disabilities. In these more extreme forms of epilepsy, it can be easier to pinpoint the malfunctioning genes. In less challenging epilepsies, it can be more challenging to pick out the genetic variants.

Approximately 1,000 genomes have been sequenced as part of the Genomics England 100,000 Genomes Project and we are now at the exciting stage of interpreting the data alongside each person’s phenotype, including their health and the history of their epilepsy.

SUDDEN UNEXPECTED DEATH IN EPILEPSY

We are also looking at Sudden Unexpected Death in Epilepsy (SUDEP) – the most common cause of death in epilepsy. Every year, 600 people lose their life to SUDEP in the UK and the impact on friends and families is devastating. Scientists believe that there may be multiple mechanisms involved in SUDEP.

We want to increase our understanding of the risk factors for SUDEP by identifying genetic changes which could increase a person’s susceptibility. We will be sequencing the genomes of 100 people who have died of SUDEP or who are thought to be at risk. We hope that this will help us to identify those at greatest risk and put in place risk-reducing measures that will enable them to better manage their heightened vulnerability.

Our researchers also work collaboratively with other epilepsy experts across the world, pooling data and expertise to grow our understanding of the underlying causes of epilepsy. Big data is essential for recognising meaningful patterns and changes in an individual person’s genetic make-up that could be significant to their epilepsy.

NEW BREAKTHROUGHS

In recent months we have seen two significant breakthroughs which are helping to elucidate the epilepsy landscape.

We are part of a large collaboration which has been looking at the DNA of 15,000 people with epilepsy across the world, and this has enabled us to identify 16 new regions in the brain that are thought to be associated with the more common epilepsies. This is a particularly exciting development as we begin to extend our knowledge beyond that of the more severe syndromes.

Working as part of the International League Against Epilepsy Consortium on Complex Epilepsies, we have pinpointed 21 genes in these regions that are thought to be contributory factors. The research could lead to the development of new treatments for epilepsy and the repurposing of 166 existing drugs which could be suitable for treating seizures.

And in the largest neuro-imaging study of people with epilepsy, we have shown how epilepsy can affect the volume and thickness of certain regions of the brain. The changes are very subtle and their significance is not yet fully understood, but have even been seen in people with different types of epilepsy, such as idiopathic generalised epilepsy, which is typically characterised by a lack of visible changes in the brain. The study, carried out by the global ENIGMA-Epilepsy consortium and led by our scientists, pooled data from 24 centres across Europe, North, and South America, Asia and Australia.

Although it is not yet possible to know from the study whether changes in the brain are caused by the seizures or an initial insult to the brain, the results are helping to draw a neuroanatomical map of areas of the brain that are key for future studies which will lead to a greater understanding of epilepsy.

We are fortunate at Epilepsy Society that our research work is integrated with our clinical practice. But most of all, we are lucky to have so many people with epilepsy who are willing to be a part of our ground-breaking research. Our discoveries are their discoveries. Our goal of personalised medicine based on a person’s genetic make-up and individual circumstances will only ever be achieved thanks to their wish for better diagnosis and treatments, and their confidence in us to deliver.

For more information about Epilepsy Society, visit www.epilepsysociety.org.uk/epilepsy-research.

For referrals to Epilepsy Society’s specialists, assessment centre, or therapeutic drug monitoring service, visit www.epilepsysociety.org.uk/getting-referral.
FEELING THE PRESSURE

As male mental health is catapulted further into the spotlight, so, too, must be the roots of their unwarranted sense of insecurity – one of which is erectile dysfunction. With cases of the condition being attributed to both psychological and physical triggers, NIHR confronts a number of the unexpected causes.

Entrenched in a minefield of work worries, daily duties, and the pressure of fulfilling society’s stereotype of masculinity, the mental health of men calls for careful attention. Erectile problems can be a key aggravator of anxiety – and vice versa, with it being estimated that half of all men between the ages of 40 and 70 will have it to some degree.

As a result, it’s crucial that we get to the crux of the problem as soon as possible; exploring the potential causes while simultaneously advocating the importance of open discussion, and the availability of confidential, professional advice.

The inability to obtain and maintain an erection sufficient for sexual activity is a common and costly condition of men of primarily middle and older ages. It’s also one that can elicit much confusion due to the fact that homing in on the key source of influence means assessing the many possible contributors, such as neurological, hormonal, and vascular factors.

Treatment for erectile dysfunction has significantly improved during the last 10 years, but with new research surrounding these possible triggers emerging, we must continue to hone our awareness.

IN THE GENES?

A recent discovery has advanced our understanding of the genetics underlying erectile dysfunction – outlined in the study, ‘Genetic Variation in the SIM1 Locus is Associated with Erectile Dysfunction,’ which is published in the journal, Proceedings of the National Academy of Sciences.

The study pinpointed that variations in a specific place in the genome – called a genetic locus – near the SIM1 gene are significantly associated with an increased risk of erectile dysfunction. Also demonstrated was a biological role for the genetic location in regulating sexual function, strongly suggesting that these variations can cause erectile dysfunction.

Identifying this SIM1 locus as a risk factor for erectile dysfunction is a big deal because it provides the long sought-after proof that there is a genetic component to the disease, commented the study’s lead author, Eric Jorgenson, PhD, a Research Scientist at Kaiser Permanente Northern California’s Division of Research.

THE DIABETES LINK

Echoing the findings that erectile dysfunction has a genetic cause, and going further by opening the possibility that living a healthier lifestyle may help reduce risk, is a study led by the University of Exeter and the University of Oxford, which looked at data on more than 220,000 men across three cohort: 6,000 of whom experienced erectile dysfunction.

Utilising genetic analysis, the team were able to delve into the complex correlations between diabetes and aspects including body weight. They subsequently found that having a genetic predisposition to type 2 diabetes was linked with erectile dysfunction, providing evidence that diabetes can be a cause of erectile issues.

Professor Michael Holmes, of the Nuffield Department of Population Health at the University of Oxford, one of the study’s lead authors, explained, ‘Our finding is important as diabetes is preventable and indeed one can now achieve “remission” from diabetes with weight loss, as illustrated in recent clinical trials. This goes beyond finding a genetic link to erectile dysfunction to a message that is of widespread relevance to the general public, especially co-saddling the burgeoning prevalence of diabetes.’

RESTING THE CASE

While nocturia and poor sleep quality have been linked to such daytime problems as difficulty concentrating, a general lack of energy and irritability, or impulsive behaviours, three insights presented at the 113th Annual Scientific Meeting of the American Urological Association highlighted the association between poor sleep quality, nocturia, low testosterone, erectile function, elevated body mass index, and even death.

Researchers assessed the relationship between sleep and erectile function while controlling for age, BMI, burden of comorbidity, testosterone, and PDE5 inhibitor use. Caffeine, melatonin, and other sleep medication use, CPAP use, shift work, smoking, depression status, and antidepressant use were also examined.

‘These studies point to some very alarming consequences for men with impaired sleep habits,’ said Dr Tobias S Kohler, MD, MPH, FACS, Men’s Health Specialist and Urologist with the Mayo Clinic in Rochester, MN.

‘Men should be aware that a commitment to improving one’s sleep habits could lead to improved erectile function along with a host of many other established health benefits that accompany a good night’s sleep.’
**VITAROS® IS THE ONLY URETHRAL ALPROSTADIL IN A CREAM**

Find out more about the efficacy and safety of VITAROS® and why it is a first choice alprostadil for patients with erectile dysfunction (ED) at [www.vitaros.co.uk](http://www.vitaros.co.uk).

- **VITAROS® works when the cream is applied directly into the urethra**
- **VITAROS® works when stored in a refrigerator between 2-8°C immediately after purchase**
- **VITAROS® works with prolonged use and may be applied up to 3 times per week**

- Use of VITAROS® 8 times a month provides noticeable results, with continued use associated with increased efficacy vs baseline

If clinicians believe more than one treatment a week is appropriate to treat ED in their patient, this can be prescribed on the NHS.

**Dosage & Administration:**

**Vitaros** is

- 3mg/g. Indication: Treatment of men ≥18 years of age with erectile dysfunction.

**VITAROS** works when stored and applied correctly at the recommended frequency.

**Name of product:** Vitaros® (urethral alprostadil cream)

**Composition:** Alprostadil 300 micrograms in 100mg of cream (3mg/g).

**Presentation:** Vitaros® is supplied in individual sachets containing one Accudose™ container. Each single container contains 100 mg cream. Vitaros® is supplied in a cream container between 2-8°C.

**Special Precautions for Storage:**

- Storage in a refrigerator (2°C - 8°C), without freezing. Unopened container. Each single container contains 100 mg cream. Vitaros® is supplied in a cream container between 2-8°C.

**Special Warnings:**

- Treatable causes of erectile dysfunction should be excluded before initiation of Vitaros®. If priapism occurs, the patient should seek medical assistance immediately. Avoid driving or hazardous tasks due to risk of hypotension or syncope after administration, dose may need to be lowered in patients with hepatic and/or renal impairment. Inadequate intravascular exposure may result in penile burning, tingling sensation and pain. Vitaros® offers no protection from the transmission of sexually transmitted diseases, partners of Vitaros® users can experience adverse effects such as vaginal irritation. The effects of Vitaros® on the oral or anal mucosa have not been studied. A condom barrier is recommended for use with Vitaros®, including use during oral or anal sex. Only latex material based condoms have been investigated for use with Vitaros®. Other materials may not exclude possible risk of damage to the condom.

**Interactions:**

- Use of Vitaros® on the oral or anal mucosa have not been studied. A condom barrier is recommended for use with Vitaros®, including use during oral or anal sex. Only latex material based condoms have been investigated for use with Vitaros®. Other materials may not exclude possible risk of damage to the condom. Interactions:
  - Based on the nature of the metabolism of Vitaros® drug-drug interactions are considered unlikely. Not recommended for use with phosphodiesterase-5 (PDE-5) inhibitors as an additive effect profile and interactions. Possible increased risk of hypotension if used in combination with nitrates. Vitaros® may be reduced if administered concomitantly with sympathomimetic drugs, decongestants and appetite suppressants. When used in combination with anticoagulants and platelet aggregation inhibitors, there may be an increased risk of urethral bleeding, haematuria. Fertility, Pregnancy & Lactation: Pregnant women should not be exposed to Vitaros®. It is not recommended to use Vitaros® while breastfeeding. It is not known whether Vitaros® has an effect on human male fertility. Undesirable Effects: Common (≥1/100 to <1/10): rash, urethral pain, penile pain, burning erythema tingling, throbbing or numbness, genital pain, erythema or discomfort, balanitis, penile oedema, erection increased, in partner: vulvovaginal burning sensation and vaginitis. Other Serious Undesirable Effects: Uncommon (1/1000 to 1/100): hypotension, priapism, dizziness, syncope, urinary tract infection. Refer to the SmPC for details on full side effect profile and interactions. Special Precautions for Storage: Store in a refrigerator (2°C - 8°C), without freezing. Unopened sachets may be kept out of the refrigerator by the patient, at a temperature below 25°C for up to 3 days prior to use. After this the product should be discarded if not used. Presentation: Vitaros® is supplied in individual sachets containing one Accudose™ container. Each single container contains 100 mg cream. Vitaros® is available in unit cartons containing four containers. Basic NHS Price: £40 per pack of 4 doses.

**References:**

11. NHS Price: £40 per pack of 4 doses.

**Adverse events should be reported.** Reporting forms and information can be found at www.mhra.gov.uk/yellowcard.

**VITAROS® works when stored and applied correctly at the recommended frequency.**

Find out why VITAROS® is a first choice alprostadil at [www.vitaros.co.uk](http://www.vitaros.co.uk).
AXIAL SPONDYLOARTHRITIS – PROGRESS AT LAST

Despite being a painful, progressive form of inflammatory arthritis – impacting the spine, in addition to the joints, tendons, and ligaments – axial spondyloarthritis fell troublingly low on the rheumatic disease radar for countless years. Dr Andrew Keat, a retired Consultant Physician and Rheumatologist, National Ankylosing Spondylitis Society trustee, and member of their Medical Advisory Board, depicts how the 21st Century heralded a time of change for our comprehension of the condition, fostered by an upturn in energy and enthusiasm of clinicians, academics, and industry.

Until the turn of the 21st Century people with axial spondyloarthritis (AS) saw none of the therapeutic benefits gradually being meted out to those with other rheumatic diseases.

Treatment effectively followed a 50-year-old recipe of non-steroidal anti-inflammatory drugs (NSAIDs) and exercise, leavened with advice to ‘learn to live with it’. One-third of individuals with AS gave up work because of their disease, and many developed horribly visible deformity – a testimony to the therapeutic poverty of rheumatologists.

The identification of the HLA-B27 gene in 1973 failed to deliver a new therapeutic dawn, but it heralded a major shift in thinking: mechanisms underpinning AS really could be approached, making real, if not imminent, the prospect of effective treatment. The 21st Century has seen dramatic parallel developments.

The development and widespread use of magnetic resonance imaging (MRI) has made a profound impact on AS. The capacity to see the precise sites of inflammatory lesions in the spine and pelvis and to observe changes that occur with treatment has allowed research workers to speculate on the pathology of the underlying lesions and on the nature of the process of ankylosis. Moreover, by allowing detection of spinal inflammation long before bony changes can be seen on x-rays, MRI allows much earlier diagnosis than has been the case hitherto, based on Internationally-agreed criteria. Delayed diagnosis is still a major blight for many people with AS and there is much work to be done to capitalise on the opportunity that MRI offers.

Simultaneously, several disparate strands of evidence are building understanding of the pathogenesis of AS. Central to this has been identification of the enthesis as the site of the key lesion in AS. The detailed structure of entheses is now known and some correlation achieved between histological and imaging changes. However, much important work has arisen from studies of the gut.

Small and large bowel inflammatory changes are well recognised in most people with AS; some lesions resembling those of Crohn’s disease. Moreover, dysbiosis of gut micro-organisms has been suggested by several studies, although no consistent changes have yet been identified. Nevertheless, should such dysbiosis be identified, the role of diet in controlling or reversing this will become of increasing interest. Thus far, dietary studies have not been shown to be effective in the management of AS, though none has yet approached the capacity of such treatment to influence the gut microbiota.

Recent work from Sicily has shown that, in inflamed gut mucosa, there is excess local production of the cytokine IL-23. Interaction between the gut microbiota and local immune cells may be an explanation for this, though this response may occur particularly in the presence of HLA-B27 positive cells.

A similar effect with generation of IL-23
via the unfolded protein response has also been demonstrated in animal models as a result of biomechanical stress. These two possible models of abnormal cytokine production in association with HLA-B27 have been drawn together by the demonstration of a specific T-cell subset resident in enthesial tissues with receptors for IL-23, suggesting that this could be a key pathway to enthesial inflammation. It is now clear that stimulation of such cells leads on to elaboration of further cytokines, notably IL-17, which itself leads to the generation of tumour necrosis factor (TNF), a major pro-inflammatory cytokine, locally and systemically.

Thus, within the last few years it has been possible to assemble a likely pathogenetic mechanism for axSpA in which gut inflammation, with or without dysbiosis, and, perhaps, biomechanical stress leads to a stress reaction in local tissues. The consequence, excess production of IL-23, may then give rise to further changes along the pro-inflammatory chain via subsequent release of IL-23 and other cytokines.

In parallel with the gradual understanding of the mechanisms of pathogenesis, but not because of it, TNF inhibition emerged as a dramatically effective treatment of rheumatoid arthritis. Fortunately, the benefits in treatment of AS were also quickly demonstrated and the era of biological therapy established. TNF-inhibitor drugs were approved by NICE for the treatment of AS in 2008 and have radically changed the lot of people with AS. But now that the biological era is here, things are moving on. Over and above the known risks of biologic therapy, major areas for concern are: high price, restricted drug survival – up to 50 per cent of patients experiencing secondary failure at five years, less than 100 per cent efficacy and uncertainties about the effect of TNF inhibitors on structural disease progression.

Two approaches have been taken to reduce the overall cost of treatment. The introduction of biosimilar drugs, initially for etanercept and infliximab, but shortly for adalimumab also, has enabled other manufacturers to produce almost copies of the originator drugs at more modest cost; studies to date have not revealed any significant biologic or functional differences from the originator agents and it has become normal practice for patients who receive a biologic agent to be switched to, or to start, a biosimilar drug. Several studies have also investigated the potential value of using existing agents at reduced dosage. It is not clear whether reduced dosage will maintain the symptomatic and structural (potential) benefits of full dose treatment, but it’s now clear that some, though not all, patients may experience continued symptom suppression even after reducing the dose of TNF blocker agents. There is some evidence that on reverting to full dosage, symptom control may be less good, so further work needs to be done.

Alternative biologic agents have also found a place in the treatment of AS. Some of those, such as rituximab, that are effective for rheumatoid disease, have not been shown to be effective for AS. However, suppression of the IL-17 and IL-23 pathways has become an attractive approach. The introduction of secukinumab, an IL-17a antagonist, has met with success comparable with TNF-inhibitor agents in both AS and other spondyloarthritides and other IL-17 inhibitors are being introduced. Inhibition of IL-23 is also a rational approach though initial experience with ustekinumab has been disappointing.

Oral agents are now under intense study. Trials with the phosphodiesterase-4 (PDE4) inhibitor, apremilast, has shown only modest benefit in AS, though more encouraging results are reported with Janus Kinase Inhibitor treatment. These oral agents promise to tackle AS via a different mode of action so may yet provide effective treatment for those unresponsive to TNF inhibitors.

The introduction of new therapeutic agents and the prospect of yet more represents a huge step forward. Moreover, the more widespread use of MRI and increasing awareness of AS means that the number of patients identified and requiring treatment is likely to continue rising. The opportunities are emerging for therapeutically and cost-effective targeting of treatment.

In spite of all this, sight must not be lost of the more conventional forms of treatment – in particular physiotherapy and regular activity. It’s quite clear that no matter how symptomatically effective new treatments are, the need for regular activity and long-term monitoring of skeletal and functional changes are essential.

For more information about axial spondyloarthritis, contact the National Ankylosing Spondylitis Society by calling 020 8741 1515 or visiting www.nass.co.uk.
Recent research from the British Chiropractic Association (BCA) found that people in Northern Ireland experience back or neck pain more than any other region in the UK. (3) BEARING WITH BACK PAIN Back pain is an issue that will affect most adults at some point in their lives, so it is surprising that there remains a scarcity of research into its prevention and common misconceptions concerning its treatment. (4) In light of the latest research, the BCA is now joining other back pain management specialists across the world to raise awareness of the importance of protecting our spinal health and educating both patients and other healthcare professionals of the most effective treatment options available.

When leading a busy life, it is often easy to overlook the early warning signs of back problems. Recent research by the BCA revealed that women are more prone to neglecting their back health, taking twice as long as men to seek professional help for their pain. (5) Yet patients failing to pay enough attention to their back could increase the potential of experiencing persistent spinal pain. Although back pain can’t be attributed to a single cause, there is strong evidence linking the condition with sedentary lifestyles, a problem that is becoming particularly pertinent amid the growing trend to spend long hours working behind a desk. Other lifestyle factors associated with poor health, such as smoking and obesity, have also been referenced as potential contributors to back pain (6), pointing to the changes we can make to prevent the condition.

WHAT IS CHIROPRACTIC?
Chiropractic is a regulated primary healthcare profession which encompasses the effective treatment strategies as outlined in The Lancet series. Chiropractors take a holistic approach to care, specialising in the examination, diagnosis, treatment, and management of conditions of the spine and other musculoskeletal conditions. Various evidence-based techniques are used by chiropractors to reduce pain, improve function, and increase mobility as part of a full package of care for managing low back pain which includes education and advice to stay active, spinal manipulation, massage, and exercise therapy as recommended by NICE. (7) PREVENTION As is the case with many ailments, prevention of back pain is always better than cure. Our bodies are not designed for inactivity, so it is crucial to keep moving on a regular basis to avoid musculoskeletal pain such as back or neck pain. My general advice for patients is therefore to incorporate more movement into their daily lives, reducing the amount of time spent sitting in one position and taking time to stretch regularly. In clinic, I find that patients are often surprised at the difference they feel just by making some simple changes to their daily routines, such as taking regular breaks from their desks to stretch and move or incorporating more exercise into their lifestyle.

Catherine Quinn
Recent research from the British Chiropractic Association (BCA) found that people in Northern Ireland experience back or neck pain more than any other region in the UK. (3)
The BCA provides practical advice to assist the one-in-10 Brits that continue to suffer in silence. (8) Straighten Up UK, a simple, three-minute stretching programme designed to improve posture and help prevent back pain by promoting balance, strength, and flexibility in the spine, is available for free on the BCA’s website (www.chiropractic-uk.co.uk/straighten-up-uk).

RELIANCE
Prevention is only one part of the wider story concerning back pain’s prevalence in the UK and across the globe. While such steps are crucial in diminishing the likelihood of musculoskeletal pain, for those already in the throes of back pain it may be necessary to consider alternative methods. Nevertheless, such options must be approached with caution given the misconceptions that surround the treatment of the condition.

The recent review in The Lancet collates evidence for treatments for low back pain from multiple examples of high-level research, attesting to the benefits of gentle exercise and continuing daily activities. Additionally, the report makes a valuable contribution to the discussions dispelling ungrounded beliefs in best practice among healthcare professionals for the alleviation of back pain.

Billions of dollars continue to be spent on spinal fusion surgery in America, despite high rates of failure and limited evidence supporting its use. Furthermore, the referral of patients for imaging greatly increases their likelihood of receiving unnecessary care and surgery. (9) The 68 per cent of sufferers stating that they are still in pain for more than 12 hours per day despite treatment (10), strengthens the researchers’ calls for the reduction of invasive spinal procedures and the crucial need for global strategies for managing the condition which are both cost-effective and personalised to the patient.

THE ROLE OF CHIROPRACTIC
At a time when alternatives to medication and surgery are required for treatment of back pain, the recent The Nordic Maintenance Care Program report (11) stands as a pivotal testament to the efficacy of chiropractic maintenance care in lieu of symptom-guided treatment. The report details a clinical trial, in which a group of patients with persistent or recurrent lower back pain were all initially given standard chiropractic care. Following this, these patients were randomised into one of two groups.

For the first group, the frequency of their visits over the following year were driven by the patients having recurring pain. For the second, a programme of Maintenance Care (MC) was implemented where the chiropractor themselves scheduled regular visits, aiming to see the patient before any reoccurrence or flare up of lower back pain occurred. The result for the group with MC was a marked and significant reduction of an average of between 10-to-15 days less with bothersome pain over a 52-week period. (12)

The authors conclude that visiting a chiropractor before low back pain reoccurred was more effective at reducing symptoms than seeking treatment only when the pain reoccurred. For those experiencing persistent back pain, paying a visit to a chiropractor could reward you with an extra two weeks per year of precious pain-free days.

The BCA strives to open up the conversation concerning treatment options for back pain in order to rectify the one-third of patients claiming that they have been poorly informed about new options to manage their pain. (13) Through increasing education on back pain and its treatment, preventative measures and chiropractic visits can entrench themselves as viable alternatives to painful, costly, and often ineffective, treatments.

ABOUT THE BRITISH CHIROPRACTIC ASSOCIATION
The British Chiropractic Association (www.chiropractic-uk.co.uk) is the largest and longest established association for chiropractors in the UK, representing over 50 per cent of all registered chiropractors across England, Scotland, Wales, and Northern Ireland. The British Chiropractic Association members are regulated by the General Chiropractic Council and required to maintain high standards of conduct, practice, education and training.

REFERENCES
3. Consumer research carried out between 28/02/2018 and 07/03/2018 on a sample of 2,066 UK adults aged 16+ on behalf of the British Chiropractic Association
5. Consumer research carried out between 28/02/2018 and 07/03/2018 on a sample of 2,066 UK adults aged 16+ on behalf of the British Chiropractic Association
7. NICE guideline NG59, November 2016
8. Consumer research carried out between 28/02/2018 and 07/03/2018 on a sample of 2,066 UK adults aged 16+ on behalf of the British Chiropractic Association
Bifidobacteria and lactobacilli are the commonest types of bacteria used probiotics in order to fortify the intestinal microbiota. Currently there is something of a dichotomy between what the science is telling us and the (absence of) health claims that are allowed to be made to consumers. As a result, throughout Europe advertising for probiotics remains rather nebulous. There is a need to demonstrate more clearly which products have been shown in good studies to help in which conditions and therefore eligible for transparent claims.

Alternatively, by including basic foods or supplements in the diet that will act as growth substrates, it’s possible to selectively promote an individual’s existing ‘healthy microbiota’. Put simply, this means feeding your own bacteria with what they need to flourish.

These foods are known as prebiotics, and they can be defined as ‘a substrate that is selectively utilised by host microorganisms conferring a health benefit’. It can be compared to using a fertiliser to help the growth of the positive components of gut microbiota. It is possible to target, in a specific way, particular microbes indigenous to the gut microbiota that carry positive health benefits.

This happens during breast-feeding, for example, where bifidobacteria become very dominant in the gut as a result of high levels of oligosaccharides found in breast milk.

Sources of prebiotics include several natural foods such as asparagus, onion, artichoke, bananas, leeks, and chicory. But manufactured forms are now being developed as dietary supplements or processed food ingredients. Most interest in the development of prebiotics has been aimed at non-digestible oligosaccharides, such as inulin-type fructo-oligosaccharides and galacto-oligosaccharides. Both have been shown to be prebiotics, through numerous reproducible volunteer trials, as evidenced by their ability to positively change the gut microbiota composition after a short feeding period. They have been tested in IBS, IBD, obesity, Travellers’ Diarrhoea, atopic issues, infants, and elderly people. Trials that include a functional, as well as compositional, assessment of microbiota changes following prebiotic may be a useful way forward, as are further studies into clinical outcome.

**EXAMPLES OF SOME PREBIOTIC STUDIES**

A trial of prebiotics in infants using a GOS/FOS (9:1) prebiotic at 8g/L for two months showed that when prebiotics were added to a formula feed, this could generate similar levels of faecal bifidobacteria and lactobacilli to those seen in breast-fed babies, and significantly more (p<0.05) than in babies fed with

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**GUT MICROBIOTA**

**A GUT FEELING**

Did you know that the human body has over 100,000 billion bacteria in the gut alone, located mainly in the colon? With the past decade having marked a growing interest in the importance of gut microbiota to health, Professor Glenn Gibson, Department of Food and Nutritional Sciences, University of Reading, strengthens our awareness of human gut microbiota and prebiotics, and summaries some of the segments of research relating to this area.

Although information about the microbial composition of this ecosystem in health and disease remains incomplete, it is known that the GI tract contains five-to-six phyla, 50-to-60 different genera, and over 1,000 different species of bacteria. Together these make the gut the most metabolically active organ in the body. About 70 per cent of our immune system also lies within the gut and the microbiota has a complex interaction with it, helping to protect us from infection and disease.

Many diseases have been linked in some way to the microbiota, including ulcerative colitis, irritable bowel syndrome (IBS), peptic ulcers, and bowel cancer. Some bacteria are well-known as pathogens – species of enterobacteria or clostridia, for example, may cause infections, diarrhoea, liver damage, or produce carcinogens. Fortunately others, especially lactobacilli and bifidobacterial, inhibit the growth of harmful bacteria, aid the digestion and absorption of food, synthesise vitamins, reduce inflammation, and stimulate immune function.

There is now a heavy focus on therapeutic modulation of the microbiota as a way to optimise health and prevent disease. Tactics range from interventions during pregnancy and delivery of a newborn (when we are seeded with microbes from our mother and family), to lifestyle and dietary modifications throughout development and adult life. More specific interventions, such as faecal transplants, are also under study.

Taking the view that the gut is an ecosystem, one of the simplest ways to improve the health of that ecosystem is to manipulate the diet, because this is the main driver for the composition and activity of the gut microbiome.

**AT LEAST TWO APPROACHES CAN BE USED**

Firstly, live microbes, known as probiotics, can be added to the diet. Nearly 20,000 research articles have now been published on probiotics. Although the use of probiotics in diarrhoeal disease has been most extensively studied to date, a growing number of studies have explored the use of probiotics for use in conditions such as inflammatory bowel disease (IBD) (with particularly promising data in pouchitis); constipation; lactose intolerance; and for use as adjunctive therapy in H. pylori eradication.

Bifidobacteria and lactobacilli are the commonest types...
In atopic dermatitis, a prebiotic infant formula was shown to be beneficial in reducing the disease burden. In one study, infants at risk of atopic disease were given prebiotic formula (0.8 per cent GOS/FOS 9:1) or control (0.8 per cent maltodextrin) for six months. At follow-up at 18-to-24 months, dermatitis was reduced in those given the prebiotic. It’s thought that this inflammatory dampening effect is due to cell wall structures of bifidobacteria, which were selectively enhanced with the prebiotic.

Ref: Moro et al. Arch Dis Child 2006; 91: 814-819

A double blind placebo-controlled study in healthy volunteers showed that a GOS prebiotic developed at the University of Reading had a striking bifidogenic effect at a daily intake of 1.37g of active ingredient (at 3.6g/d and 7g/d dose of GOS). The bifidogenicity and prebiotic effect of GOS followed a dose response relationship, and led to levels of bifidobacteria similar to those seen in the gut flora of breast-fed infants. The prebiotic value of GOS was attributed solely to bifidogenicity.


As we age, levels of bifidobacteria and other health-promoting genera decrease while, concomitantly, gut inflammation increases. A further trial of GOS in older people demonstrated significant increases in bifidobacteria numbers after five weeks, followed by a further significant increase after another five weeks of treatment. At the end of the 10-week treatment, the bifidobacterial profile of the elderly subjects was similar to that of healthy adults. In the same study, beneficial effects on immune function markers were shown with this GOS prebiotic compared to placebo, with a favourable shift in cytokine ratios towards a less inflammatory picture. Results included effects on IL-6 (P<0.001) IL-10 and TNF-a (P<0.01) and IL-1b (P<0.05) as well as enhanced phagocytic activity against E. coli. Significant improvements were also shown in NK and T cell activities compared to placebo.

Ref: Vulevic et al. (2015) British Journal of Nutrition 28, 1-10

Human studies have looked at the prebiotic GOS in IBS. This is said to affect about 20 per cent of the population of Western countries, including the UK. Levels of bifidobacteria may be reduced in IBS. In a single blinded randomised placebo-controlled study, patients with diarrhea, constipation, and alternating types of IBS were given four weeks of prebiotic. The study demonstrated increases in faecal counts of bifidobacteria and lactobacilli. When symptoms were assessed, significant improvements were seen in stool consistency, flatulence, bloating, subjective global assessment, composite score of symptoms, and anxiety.

Ref: Šilk et al. (2009) Alimentary Pharmacology and Therapy 29, 508-518

About eight years ago, there was a flurry of interest in reports suggesting that people with obesity and at risk of metabolic syndrome and type 2 diabetes had a different gut microbiota to those who are lean, with links to appetite, satiety, and inflammation in the gut. The potential benefits of GOS were demonstrated in a 12-week placebo-controlled cross over study in overweight people with risk factors for metabolic syndrome. The study showed a very specific effect on levels of faecal bifidobacteria as well as a reduction in bacteroides. By week 12, markers of inflammation had fallen (plasma C-reactive protein p<0.0012 and faecal calprotectin p<0.0001). There was also a significant fall in plasma triglycerides and cholesterol:HDL-cholesterol ratio in men but not women taking GOS. However, no changes were seen in terms of weight or blood pressure. Longer treatment regimens may be needed to achieve this.

Ref: Vulevic et al. (2013) Journal of Nutrition 143, 324-331

Studies have also shown benefits from prebiotic supplements when used by people travelling abroad. One such trial looked at people travelling to low or high-risk countries who had been randomised to either maltodextrin (a placebo) or GOS. They were monitored for frequency of bowel motions (number per day), nature of motions (semi-solid, watery, bloody), impact of symptoms of Travellers’ Diarrhoea (none, mild, moderate, or severe), and the presence or absence of abdominal pain and vomiting. The results showed a significant reduction in the incidence and duration of diarrhoea among people travelling abroad for at least two weeks. There was also a non-significant reduction in abdominal pain. While microbiological tests could not be done on the group, bifidobacteria are known to be powerful inhibitors of pathogens including enteropathogenic E.coli, Campylobacter and other common causes of acute diarrhoea.


A further benefit of increasing bifidobacteria levels is that this genus has an inability to manufacture gas as part of its metabolism and so increasing levels using GOS may help to reduce bloating and flatulence. Trials using GOS reflect this, with low levels of bloating and flatulence reported.

Further clinical studies with GOS and other prebiotics are underway and to firmly consolidate the safe role of prebiotics in maintaining health.
Allergy is an abnormal immune reaction to an otherwise harmless substance, which is termed allergen. This immune reaction may lead to chronic allergic conditions, such as asthma, rhinitis, and eczema, or acute localised or systemic allergic reactions, such as to foods, drugs, and insect bites. Allergen immunotherapy (AIT) is allergen-specific i.e., it is only effective against that particular allergen or group of allergens with similar (cross-reactive) proteins. The aim of AIT is to induce tolerance to the causative allergen, and, as a result, induce long-term disease remission (termed ‘immune tolerance’). ‘Desensitisation’ is the term used when an allergen (usually food or drug) is tolerated with immunotherapy, but only while it is being taken regularly; following abstinence, intolerance returns.

**IS AIT EFFECTIVE?**
A simple answer is ‘yes’ – but the devil is in the details. The efficacy varies depending on the quality of extract, the route of administration, the selection of patients, and the dose and duration of treatment. Additionally, the response varies according to the type of allergen and the resulting disease.

**QUALITY OF EXTRACT**
During the last few decades, significant progress has been made in the quality and standardisation of allergen extracts. However, many questions remain; the main concern is that the w/v of allergen in most of these extracts is not comparable between different manufacturers, and that there is no single standard that governs their preparation.

**ROUTE OF ADMINISTRATION**
AIT is administered as either subcutaneous injections (subcutaneous immunotherapy or SCIT) or sublingual/oral immunotherapy (SLIT/OIT). SCIT is traditionally given once weekly in gradually increasing doses (based on increase in both volume and concentration) until a maintenance dose is reached in four-to-six months’ time (updosing). Some rush protocols, however, could ensure that a maintenance dose can be reached in a few days, or even 24 hours. (1)

For the next three-to-five years, a maintenance dose is administered in four-to-eight-week intervals for three-to-five years. (Table 1) This course of treatment consumes significant healthcare resources. Further, it involves frequent and multiple hospital visits, which is inconvenient to the patient. SLIT was introduced in the 1980s and has been increasingly used in the last two decades. (2) Sublingual drops, spray, or dissolvable tablets of allergen extract are administered once a day (at home) for three-to-five years. This convenience of home administration and minimal healthcare use has led to its popularity, especially in children, but compliance may be an issue for a treatment that lasts for three-to-five years.

**DOSE AND DURATION**
Most studies conducted with varying dose regime came to the conclusion that adequate doses of immunotherapy allergen extract are required for efficacy. (3)

Similarly, most studies have demonstrated that a minimum period of three-to-five years of AIT is required to achieve...
long-lasting effect in the range of five-to-15 years. (4) There is a general consensus that a lower dose adversely affects efficacy, and a reduction in duration of therapy influences long-term remission.

**PATIENT SELECTION**

Most allergic patients are sensitised to more than one allergen. In multisensitised patients, AIT does not work effectively against several allergens, as the dose of each allergen has to be reduced accordingly to avoid systemic reactions (due to the injection of large doses of multiple allergens). (5, 6) That does not preclude AIT to a single relevant allergen in multisensitised individuals.

For example, a patient with severe hay fever could be effectively desensitised to grass pollen while being allergic to multiple other allergens. (6) Allergens with high cross-reactivity, such as different species of grass or tree pollen, can be mixed in one treatment extract.

**EFFICACY**

There is an international consensus that both SCIT and SLIT are effective in improving symptoms and quality of life and in reducing the need for medication. (7) However, the critical difference between AIT and other drug treatments is the ability of the AIT to alter the natural course of allergic disease and induce long-term remission. In other words, the effect persists for years after immunotherapy has been terminated, which is not known for most drug treatments (pharmacotherapy). However, the need for long-term and relatively expensive AIT raises the question of cost-effectiveness compared to other inexpensive, effective, and relatively safe treatments, such as inhaled, nasal, and topical steroids. Few studies have specifically looked at cost-effectiveness, but significant cost savings and improvement in quality of life has been demonstrated. (8) Although there are no head-to-head trials, where treatment extracts are available for both (SCIT and SLIT) routes, the SLIT seems a slightly less effective but safer alternative.

**SAFETY**

Local reaction (swelling and redness at the injection site in SCIT, and oral itching and tingling in SLIT), are common. Systemic allergic reactions occur rarely (mild-to-moderate systemic reactions: 0.1 per cent and anaphylaxis: one-in-one m injections) during the course of SCIT. (9, 10, 11) Although extremely rare, fatalities have been reported with SCIT and hence, it is a requirement that SCIT is only given by trained personnel in outpatient clinics or day centres, where facilities for resuscitation are available. (12) Poorly-controlled asthma and significant cardiovascular disease increases the risk, and hence SCIT is not recommended in these patients. (10) A major advantage of SLIT is the very low risk of systemic reactions and no fatalities have been reported.

**ALLERGIC CONDITIONS WITH POTENTIAL USE OF AIT**

The response to treatment varies according to how closely an allergic disease is causally related to the index allergen. For instance, it’s very effective in seasonal allergic rhinitis due to pollen allergy and in insect (bee and wasp) allergy, which are monofactorial, IgE mediated allergic conditions. Diseases that are multifactorial, such as perennial allergic rhinitis and asthma, where IgE mechanisms play a role but others factors are also important, are somewhat less responsive to AIT. In these chronic conditions, AIT is still effective as an adjuvant to other anti-inflammatory therapies. In this context, food allergic reactions fall into the former category. However, the use of AIT in food allergy had been limited until recently because of concerns regarding systemic reactions. In the last decade several studies have shown effectiveness of oral immunotherapy, successfully inducing desensitisation to peanut, cow’s milk, and egg.

Although the effectiveness of AIT is not necessarily related to the severity of the allergic condition, for practical reasons (expense, risks, and duration of treatment), most physicians would not consider using it in mild disease. AIT is therefore commonly used for pollen, insect venom, a house dust mite, and an animal allergy. Its use for mould and cockroach allergen is less well-documented.

**ALLERGIC RHINITIS**

AIT is recommended for patients with moderately severe allergic rhinitis, not well-controlled on allergen avoidance, plus optimal pharmacotherapy (a combination of antihistamines, steroid nasal spray and eye drops). (10) Avoidance of allergen is often challenging for perennial allergens, such as house dust mites, moulds, and animal dander, and nearly impossible for seasonal allergens, such as grass and tree pollens. In these patients, quality of life and work is affected, and children with severe hay fever have been shown to underachieve in their school exams. Systemic steroids are often required to control symptoms with the risk of long-term adverse health consequences.

The effectiveness of SCIT is well-documented in both seasonal and perennial allergic rhinitis. (13, 14) A significant recent advance means that SCIT to grass and / or tree pollen can now be administered as four pre-seasonal injections, avoiding the need for lengthy updosing and year-round injections, which makes this treatment more affordable and convenient. (15-17) Over the last 20 years, evidence is gradually accumulating for the effectiveness of SLIT in allergic rhinitis, both seasonal and perennial. (18)

**ASTHMA**

Cochrane and other systematic reviews have confirmed that AIT is effective in allergic asthma and has a steroid-sparing effect. (19) However, in the UK, AIT plays practically no role in the treatment of asthma. This is partly historical as respiratory physicians, who treat asthma in the UK, are not trained in the use of AIT. Additionally, questions remain regarding its cost-effectiveness in mild-to-moderate asthma, where topical steroids in combination with long-acting bronchodilators or other additive therapies (such as leukotriene antagonists) are effective and convenient with a low risk of adverse effect. In poorly-controlled asthma, where there is a significant unmet need, AIT is contraindicated due to a high risk of systemic reaction, and new biological therapies (such as omalizumab, meoplizumab) are increasingly used as safe and effective alternatives.

**VENOM ALLERGY**

AIT is very effective in inducing tolerance to bee and wasp venom for those who have had anaphylaxis to bee or wasp with improvement in their quality of life. (20) It is administered as SCIT, usually using the traditional regime of weekly, and then monthly, injections (although rush immunotherapy regimes are also safe and effective). Once AIT is completed, the risk of
repeated bee and wasps stings, such as gardeners and bee-keepers.

**DRUG ALLERGY**

Drug allergic reactions are common, but in most cases, an alternative drug can be used equally effectively. Hence, avoidance of the drug in question is the first line of management. However, when a suitable alternative is not available, for instance, in a diabetic patient who is allergic to insulin, or in a cardiac patient who is allergic to aspirin, desensitisation to the drug is possible.

The drug is administered in gradually increasing doses until the effective dose of the drug is tolerated.

**FOOD ALLERGY**

Oral immunotherapy (OIT) to major food allergens, such as cow’s milk, eggs, and peanuts has been shown to be effective in inducing desensitisation when administered in gradually increasing amounts over a six-to-12 months period. The food is used as raw or in modified forms with or without adjuvant therapy. The risk of anaphylaxis is uncommon, but may occur in five-to-10 per cent of patients during the course of treatment. Most studies have been in children – although a few adult studies show similar efficacy.

Despite the fact that the success rate reaches 80 per cent, most children have to continue to consume the food on a daily basis to keep their tolerance. (21) Although increasingly used in many centres there is as yet no consensus on the best approach with regards to the dose, duration, and patient selection in food OIT.

**PREVENTION OF DEVELOPMENT OF ALLERGY**

Interest is growing in the use of AIT to prevent the development of allergic sensitisation, rhinitis, and asthma in high-risk children, and a few published studies confirm proof of concept. (22) However, more evidence is needed using large randomised controlled trials design before this preventive use of AIT finds it place in routine clinical practice.

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**Table 1: A Sample Schedule for Subcutaneous Immunotherapy**

<table>
<thead>
<tr>
<th>Dilution</th>
<th>Concentration</th>
<th>Volume (ml)</th>
<th>Dosage (SQU*)</th>
</tr>
</thead>
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<td>100 SQU*/ml</td>
<td>0.2</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.4</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.8</td>
<td>80</td>
</tr>
<tr>
<td>1:100</td>
<td>1000 SQU/ml</td>
<td>0.2</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.4</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.8</td>
<td>800</td>
</tr>
<tr>
<td>1:10</td>
<td>10 000 SQU/ml</td>
<td>0.2</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.4</td>
<td>4000</td>
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<tr>
<td></td>
<td></td>
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<td>8000</td>
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<td></td>
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<td>2000</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>1.0</td>
<td>10000</td>
</tr>
</tbody>
</table>

**Maintenance Phase**

Three-to-five years

---
WIDER CHOICE, GREATER SAVINGS FROM THE ZERODERMA RANGE

The Zeroderma range now includes five creams, one ointment, one gel, two bath additives and a new barrier cream. All Zeroderma products are gentle on the skin and do not contain the harmful irritant sodium lauryl sulfate (SLS).

Zeroderma products are similar in formulation to around 40% of emollients currently prescribed by Local Commissioning Groups and offer cost savings of up to 37%, with no compromise on patient care. Around 80% of formularies and prescribing guidelines already include at least one Zeroderma product. The Zeroderma emollient & barrier cream range is available on prescription.

A CCG who recently started using the Zeroderma range commented:

‘Emollient prescribing has been a useful area to address as part of QIPP. The focus has been on optimising patient care by offering emollient products that patients are happy to use. Feedback from GPs has been positive and changes have been simple to implement. Patient care has not been compromised and changes to the product prescribed have been acceptable to most patients.’

The Zeroderma emollient & barrier cream range is available on prescription.

Zeroveen® Cream – a 2-in-1 emollient containing natural oatmeal.

Zeroveen is a non-greasy, silky, 2-in-1 moisturising cream and wash containing natural oatmeal. With proven 24-hour moisturisation1, Zeroveen has both occlusive and humectant properties, as it contains glycerol to actively draw moisture into the skin. The 500g airless pump dispenser offers less than 2% wastage.

NEW Zerolon® Barrier Cream – helps to prevent irritation from bodily fluids.

Zerolon Barrier Cream moisturises and protects damaged, intact or inflamed skin, and is suitable for use with incontinence pads2. Zerolon barrier cream is available in a 28g and 92g tube and only requires pea-sized amounts for application, and is resistant to wash off2.

Survey shows the benefits of Zerodouble® Gel

Zerodouble Gel is a highly moisturising, double-action emollient gel. Results from a recent survey with over 300 members of the Psoriasis Association3 showed that 97% liked the feel of Zerodouble Gel, 91% said it was as good as or better than their current emollient and 84% wanted to continue using Zerodouble Gel.

By changing from proprietary emollient & barrier cream brands to the cost-effective Zeroderma range, the NHS could save over £9 million4 p.a.

QIPP TOOLKIT

A QIPP & emollients toolkit developed by Medicines Management teams contains everything needed to implement product changes at practice level. To estimate your potential local savings and find out more please visit: qipp.zeroderma.co.uk

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Moving from BuTrans 5, 10, 15 or 20µg/h to Butec...

A like for like switch..

Butec sits in Category C of the drug tariff.

Prescribing Butec by brand is the only way to ensure patients receive a like for like switch while delivering drug cost savings to the NHS.

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Or contact your local account manager at:
http://www.qdem.co.uk/hcp/team/

Butec® patches contain an opioid analgesic. Butec® 5 µg/h, 10 µg/h, 15 µg/h and 20 µg/h Transdermal Patch

INDICATIONS Treatment of non-malignant pain of moderate to severe intensity when oral opioids is necessary for obtaining adequate analgesia. Butec® is not suitable for the treatment of acute pain.

PRECAUTIONS And WARNINGS Acute alcohol intoxication, head injury, shock, reduced consciousness of uncertain origin, intracranial lesions or increased intracranial pressure, severe hepatic impairment, history of drug abuse, alcohol abuse, serious mental illness or seizure disorder. Not recommended immediately postoperatively or for situations characterised by a narrow therapeutic index or for rapidly varying analgesic requirements. Chronic use of buprenorphine may lead to physical dependence and a withdrawal syndrome may occur. May affect ability to drive and use machinery.

INTERACTIONS MAOIs, CNS depressants (e.g. benzodiazepines, opioid derivatives, antidepressants, sedatives, alcohol, anxiolytics, neuroleptics, clonidine), CYP 3A4 inhibitors and inducers, products reducing hepatic blood flow (e.g. halothane), monoamine oxidase inhibitors (MAOIs) within the past 2 weeks, myasthenia gravis, delirium tremens.

SIDE-EFFECTS Common (≥1/10) and uncommon (≥1/100, <1/10) side-effects are anorexia, confusion, depression, insomnia, nervousness, anxiety, headache, dizziness, somnolence, tremor, dry mouth, constipation, nausea, vomiting, abdominal pain, diarrhoea, dyspepsia, dry mouth, pruritus, erythema, rash, swelling, exanthema, muscular weakness, allergic reactions, site reaction, tiredness, asthenic conditions, peripheral oedema. Uncommon (<1/100) but potentially serious side-effects are hypersensitivity, anaphylactic/anaphylactoid reaction, affect lability, restlessness, agitation, euphoria, hallucinations, libido decreased, aggression, psychotic disorder, drug dependence, mood swings, depersonalisation, sedation, dystartria, migraine, syncope, paraesthesia, balance disorder, speech disorder, convulsions, blurred vision, visual disturbance, eyelid oedema, vertigo, palpitations, tachycardia, angina pectoris, hypotension, circulatory collapse, hypertension, orthostatic hypotension, wheezing, respiratory depression, respiratory failure, asthma aggravated, hyperventilation, dysphagia, ileus, diverticulitis, bilateral colic, urticaria, dermatitis contact, face oedema, urinary retention, erectile dysfunction, sexual dysfunction, oedema, drug withdrawal syndrome (including neonatal), chest pain, claudication, transferase increased, accidental injury, fall. Please consult the SPC for details of other side-effects.

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