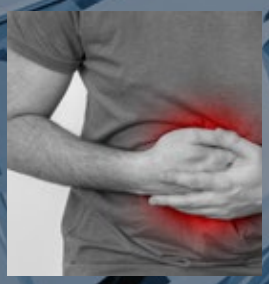
Innovation | Technology | Healthcare | Pharmacy

Scottish Pharmacy Review

ISSUE **120** - 2018

BREAKING THE TABOO

NEW HELP FOR MEN'S HEALTH



TOP OF THE CLASS
Back to school special 2018

COELIAC DISEASE
Closing in on the clinical chameleon

DAY IN THE LIFE
At a dispensing doctor's surgery

SCOTTISH PHARMACY AWARDS
The 2018 countdown is on

WIDER CHOICE, GREATER SAVINGS FROM THE ZERODERMA RANGE

How much could you save on emollient prescribing?

The Zeroderma emollient range offers a choice of five creams, one ointment, one gel and two bath additives - providing complete emollient therapy for moisturising, washing and bathing. 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 Health Boards 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 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.'

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

Up to 31% cost saving per pack

Zeroveen is a non-greasy, silky, 2-in-1 moisturising cream and wash containing natural oatmeal. With proven 24-hour moisturisation[2], 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.

Zeroderm® Ointment – convenient 3-in-1 emollient therapy

Up to 37% cost saving per pack

SLS-free Zeroderm Ointment provides a rich 3-in-1 emollient for the management of eczema and dry skin conditions. Zeroderm Ointment can be used as a skin cleanser, a bath additive and as a leave-on moisturiser.

Survey shows the benefits of Zerodouble® Gel

Up to 16% cost saving per pack

Zerodouble Gel is a highly moisturising, double-action emollient gel. Results from a recent survey with over 300 members of the Psoriasis Association[3] 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.

QIPP TOOLKIT

By changing from proprietary emollient brands to the cost-effective Zeroderma emollient range, the **NHS could save over £14 million[1] p.a.**

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**

For FREE samples for patient evaluation please email: zeroderma@thorntonross.com

1. PCA data, June 2017. 2. Study to determine the effect of two moisturisers, data on file. 3. Data on file, T&R, 2015

T R Thornton & Ross DERMATOLOGY

Thornton & Ross, Linthwaite, Huddersfield HD7 5QH
01484 842217
www.zeroderma.co.uk
zeroderma@thorntonross.com

SPR
ISSUE 120 – 2018

MEDCOM
www.scothealthcare.com
www.pharmacy-life.co.uk

EDITOR
SARAH NELSON
sarah.nelson@medcom.uk.com

SALES DIRECTOR
CHRIS FLANNAGAN
chris.flannagan@medcom.uk.com

ACCOUNTS MANAGER
DONNA MARTIN
accounts@nimedical.info

STUDIO MANAGER
DECLAN NUGENT
design@nimedical.info

MANAGING DIRECTOR
BRIDGET MCCABE
bridget.mccabe@nimedical.info

IF YOU WISH TO CONTACT US BY TELEPHONE – **02890 999 441**

To access the previous edition of SPR online, visit www.scothealthcare.com/previous-issue

WELCOME

Sarah Nelson Editor
sarah.nelson@medcom.uk.com

EDITOR'S LETTER

Welcome to the latest edition of Scottish Pharmacy Review!

Although I work in the city, I reside in a small town – and trust me, the space I could fill recounting tales from the tediousness of doing so would be larger than the area I live in itself.

Many things become oh-so-familiar when you put roots down like I have, like each shopping trip taking twice as long as necessary because if you're not related to the shopkeepers, you can bet your friends are.

It doesn't matter how long it's been since you completed your driving exam – you will pass your previous instructor on the roads at least once a week, and still feel tremors of terror that he'll catch you veering too close to the footpath.

And you can forgo any sense of a subtle existence; your latest Facebook status will be the talk of the local pub before you've even clicked 'post.'

I have seen one change to this 'small-town-syndrome' in recent years, though, which I think we can all relate to regardless of whether Uber is able to reach our street or not. Where once my local press was dominated by stories of small-town glory and rather trivial matters, tragedy has now taken hold; and the topics of suicide and addiction are claiming far too many front covers.

They're no longer issues we just acknowledge from a disconcerted distance, as the degrees of separation between us and those we know affected by them are closing in at a frightening pace.

Thankfully, to try to match this, we're seeing our mental health services – and those across all spectrums of the sector – doing all they can, including coming at the subjects from new, interesting angles.

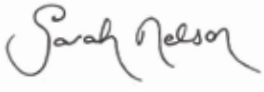
In this edition of SPR we touch on this, assessing the science of suicide prevention (page 19), and taking a look at how the word 'recovery' is being reclaimed from politicians and policymakers (page 15).

Male health is a dominant theme this quarter too as we examine the progress in prostate cancer treatments and how erectile dysfunction is a taboo topic no more (beginning on page 16).

Elsewhere, as the race to the stationery shops recommences, our 2018 back to school special is here to aid your management of young ones' concerns – including nutrition, skincare, ADHD, and more (beginning on page 46).

Don't forget to check out the exciting launch of the 2018 Scottish Pharmacy Awards, and how you can get involved (beginning on page 29).

Happy reading!



@MEDCOMscot Medical Communications Ltd

Pharmacy IT Solutions

powered by Cegedim Rx

A complete suite of products & services designed to help YOUR Pharmacy **SAVE time & money** whilst **MAXIMISING revenue, profit & patient loyalty.**

ONE Solution, ONE price, ONE contract

Find out more at **www.cegedimrx.co.uk** or call

0330 303 3342

CONTENTS

ISSUE 120 – 2018


» p.12


» p.29


» p.46


» p.18
» Credit: Sandy Young


» p.6

NEWS

SLIM PROGRESS TOWARDS SCOTTISH DIETARY GOALS

There has been little progress towards improving Scotland's national diet and health over a 15-year period, according to research conducted by Robert Gordon, Abertay, and Newcastle Universities.

The study – funded by Food Standards Scotland – examined annual trends in food consumption and nutrient intakes between 2013 and 2015, utilising food purchase data from the UK Living Costs and Food Survey. This data was then evaluated alongside a previously-published report which focused on figures from 2001 to 2012.

The aim of the research was to monitor the nation's progress towards the Scottish Dietary Goals – first published in 1996, prior to being updated in 2013 and 2016 – with the findings subsequently indicating that intakes of fruit and vegetables, oil rich fish, and dietary fibre remain too low, with free sugars, total fat, and saturated fat being too high in relation to the aims.

Although there has been a small reduction in the levels of free sugars and saturated fat, when compared to the initial 2001 data, progress towards a diet that will improve and support the health of the Scottish population has been very slow.

Dr Lindsey Masson, a Nutrition Lecturer from Robert Gordon University and Registered Nutritionist, acted as Principal Investigator for the study, and remarked, 'In Scotland, 65 per cent of adults are overweight and 29 per cent of adults are obese. Therefore, it is essential that we start to reduce our consumption of foods that are high in sugar and fat – namely biscuits, confectionery, crisps, cakes, pastries, puddings and sugar-sweetened drinks.

'In addition to raising awareness of the health benefits of meeting dietary recommendations, the Scottish government needs to support the population in achieving these dietary goals.'

Dr Lindsey Masson

CONVERSATION-CENTRIC CAMPAIGN LAUNCHED BY RPS IN SCOTLAND

The Royal Pharmaceutical Society (RPS) in Scotland has revealed that it's rolling out the new campaign, 'Good Care Starts with a Conversation', highlighting the crucial role which pharmacists play in ensuring that people reap the most rewarding experience from their medicines. The campaign urges the public to #talktopharmacy if they have any questions about their medicines.

The emphasis on the course of action relates to recent years' research which has demonstrated that awareness of the role of the pharmacist and the availability of pharmacy services remains worryingly low.

'There is a clear need for these conversations to take place,' explained Alex MacKinnon, Director at RPS in Scotland.

'20 per cent of adults take more than five medicines and for people over 70 this rises to 59 per cent. In addition, up to half of all medicines prescribed are not taken as intended.'

He continued, 'Pharmacists must play a much larger role in our NHS to ensure better outcomes for people and prevent avoidable hospital admissions. Our campaign urges people to talk to pharmacy because the good care we all want to see across our NHS starts with a conversation.'

The RPS in Scotland is encouraging all pharmacists to join them in raising awareness about the positive impact of day-to-day interactions in their practice.

For more information, and to access the campaign materials, visit www.rpharms.com/making-a-difference/scotland/good-care-starts-with-a-conversation.

NEW HEALTH CENTRE IN NORTH EAST GLASGOW TAKES A STEP FORWARD

Plans for the establishment of a new £40-plus million health and social care hub have forged ahead – set to be a focal point for a plethora of services for not only the East End, but also the wider North East of Glasgow.

The NHS Greater Glasgow & Clyde board has announced that it's supporting the initial agreement for the proposed new centre as part of a plan to boost performance across a number of services, and reduce inequalities for people living in the area. It's also anticipated that the hub will increase capacity and adaptability of the facility compared to the current, older centre in the area.

In addition, it will improve access to services and better integration between health and social work teams and services.

The new hub's offerings are expected to encompass:

- All the existing health centre services (such as general practice, pharmacy, dental, speech therapy)
- Specialist children's services
- Rehabilitation and enablement services
- Health visiting
- District and school nurses
- Older people's mental health services
- Social work child and family teams
- Learning disability services
- Health improvement services

A wide-ranging public engagement exercise was carried out with local people, service users, and carers between March and June last year, while an array of staff from the services expected to be involved in the site have participated in workshops and engagement activities, and have contributed to the initial agreement.

The next stage is for the initial agreement to be submitted to the Scottish government's Capital Investment Group (CIG). If the CIG approves the initial agreement, the health board will then progress to the Outline Business Case stage.

SCOTLAND'S ORGAN DONOR REGISTRATIONS REACH HALF THE POPULATION

New data has detailed not only that half of Scotland's population has registered to donate their organs or tissue after their death, but that the country continues to have the highest rate in the UK.

There are more than 2,724,000 Scottish residents registered on the UK Organ Donor Register, or 50.4 per cent of Scotland's population, and surveys show that around 90 per cent of people support organ donation. Approximately 550 people in Scotland are waiting for an organ transplant, which could save or transform their lives.

The rise in registered donors can be attributed to the number of high-profile annual awareness-raising campaigns, as well as the recent introduction of legislation to the Scottish parliament that would move Scotland to a soft opt-out system, with appropriate safeguards. Under the proposed system, if someone has not stated a decision about donation after death, they may be deemed as having authorised it.

Health Secretary, Jeane Freeman, announced the landmark achievement while visiting Queen Elizabeth University Hospital to learn about the work of the hospital's kidney transplant and dialysis units.

She said, 'Just over half of Scotland's people have registered to donate their organs or tissue after death, reflecting both their incredible generosity and the progress we have made in highlighting the need for organ donors. However, we need more people to register. Most organ and tissue donations can only occur in tragic circumstances, and only one per cent of people die in circumstances where they could be an organ donor. Registering only takes two minutes and could save or transform someone's life.'

Additionally, Marc Clancy, Consultant Transplant Surgeon at the Queen Elizabeth University Hospital, said, 'I have seen the unit grow from a small size performing 60 transplants a year to become the largest in Scotland.

'We are now transplanting 180 organs annually while achieving some of the best success rates in the UK. This is testament to the commitment of our staff and the national drive to expand organ donation.'

BRITISH HEART FOUNDATION, MICROSOFT AND THE NHS TO MAP PUBLIC DEFIBRILLATORS

Thousands more lives could be saved from cardiac arrests as a result of a ground-breaking partnership between the NHS, the British Heart Foundation (BHF), and Microsoft who are coming together to map all of the UK's defibrillators, with a shared ambition for the life-saving devices to be made readily available for every out-of-hospital cardiac arrest.

The initiative is in response to shocking figures that show that public access defibrillators are used in less than three per cent of out-of-hospital cardiac arrests, significantly reducing the survival chances of thousands of people every year.

Combining their expertise in technology and healthcare, the BHF, NHS England, NHS Scotland, and Microsoft solutions provider, New Signature, will now work together over the next 12 months to develop a comprehensive network of defibrillators across the UK that can be used by ambulance services. The pioneering project is expected to help save lives every day right across the country.

There are over 30,000 out-of-hospital cardiac arrests every year in the UK, but less than one-in-10 people survive. In countries where the public are better equipped to recognise and deal with cardiac arrests, survival rates are up to three-times higher.

Pauline Howie, Chief Executive of the Scottish Ambulance Service, explained, 'The role of the public in a cardiac arrest scenario should not be underestimated. Ambulance services aim to get to cardiac arrests, the ultimate medical emergency, as quickly as possible. But every minute counts, meaning that CPR and public access defibrillators provide a lifeline for victims.'

ALL IN A DAY'S WORK

Pharmacist Elizabeth Kennedy invites SPR to step through the doors of a dispensing doctor's surgery and survey the scope of work experienced during her regular working day.

Elizabeth Kennedy helping a patient

I work in Newcastleton Medical Practice, the most southerly practice in NHS Borders, and a very remote and rural dispensing practice. It serves a population of about 1,500 and is 15 miles from the nearest community pharmacy. The surgery has patients who live within four different health boards (two Scottish and two English), and the practice area covers that with a radius of 15 miles.

These factors make it a GP surgery with some unique features. There are two-and-a-half full-time GP equivalents at the practice. I have an MSc in Clinical Pharmacy and I have qualified as an independent prescriber. One of our GPs, who recently joined us from a city practice, has remarked on how useful it is to have a pharmacy and pharmacist within the practice, and that all GP surgeries should run like this.

Arriving at work on Monday morning, I see a bench full of prescriptions ready to check. This is the most predictable part of my day, but no two days are ever the same.

Newcastleton is a very popular holiday destination. In addition to human visitors we get a lot of midges! A patient arrives asking for something for his midge bites, but when I examine him I realise he has experienced an acute urticarial reaction. I am able to prescribe oral steroids and topical preparations.

In the middle of the morning, I follow up a patient we had seen before the weekend. She is immunosuppressed and had presented on Friday with an infected wound on her arm. After a short discussion with the GP, I had prescribed Flucloxacillin. During that consultation, she also told me she had asthma and COPD. The patient had a home nebuliser that she had bought herself, and used salbutamol frequently. I counselled her on the use of her preventer inhalers. She had been inhaling her two dry powder devices very slowly and steadily, so I demonstrated how to use them correctly; fast and strong with breath-holding. When the patient returned for this review after the weekend, she could not believe the difference in her breathing now that she was using them correctly. Her wound had healed too.

During this time, the GPs are running their busy morning surgeries and I receive an acute script for antibiotics and oral steroids. I get it ready and then counsel the patient, advising her to start her prednisolone as soon as she gets home. This is a very efficient system, and we know that the patient has received their medicines; we are aware that some patients don't go to their community pharmacy to get scripts dispensed.

Next, I receive a patient's request for Fluoxetine, but note that she had not had this for three months. I am able to contact her and organise a GP review to discuss restarting. Going through my pile of scripts to check, I find one for Irbesartan 300mg. We can't get a supply of 300mg tablets this week, so I am able to change the script to two x 150mg and attach a note to the patient's medicines. This is so much easier than having to phone the GP surgery and obtain a new script.

In the surgery, especially on a Monday morning, the phone never stops ringing. I hear the receptionist say, 'I will just put you through to the pharmacist'. I'm able to triage this call about medicines, meaning that the duty doctor isn't interrupted in surgery. Another patient then turns up at reception to see me, saying, 'I didn't want to bother the GP with this, so I have come to see you'. As I am returning to the dispensary, another temporary resident arrives, reporting that he has forgotten all his usual medicines. I contact his usual surgery to confirm his current prescription, and then prescribe and issue accordingly. In my role integrated within the practice, I can reduce the GPs' workload for medication-related queries such as these.

At the end of the morning surgery, the GP sees a patient who suggests that she might take an overdose of all her medicines. The GP asks me to issue her medicines in weekly instalment dispensing. I thus sort her medicines, and visit her house on my way home for lunch to deliver them and discuss it with her. I take away her current supplies, which is quite eye-opening; she has a six-month supply of several of them. The patient is also diabetic, and when I check her insulin I note that the fridge is full of chocolate traybakes and not much else. Home visits can be very enlightening!

After lunch, I am informed that a patient who is on a MAR chart has just been discharged from hospital. I discover that a few medicines had been stopped and others started. I make the necessary alterations, dispense the medicines, prepare the new MAR chart, and phone the carer on duty that day. When the carer arrives, she tells me about a problem with the medicines for another client, and I'm able to sort it there and then.

In the afternoon, I have a few planned appointments. The first is for an INR check. We use near-patient testing (Coagulacheck), meaning that the result is available immediately. I use the computer system to calculate their warfarin dose, give the patient their printed dose sheet, and organise their next appointment. This system is so much safer that phoning the patient at home with a verbal instruction.

I then see a patient whom the GP had referred to me for spirometry in which the test confirms the diagnosis of COPD. I am able to help her on her journey to quit smoking and start her on an inhaler; choosing the best option for her. I always use the 'in Check' device to make sure that patients are using their inhalers correctly. I find that running my asthma and COPD clinics within the GP surgery (with full access to the patients' medical records) enables me to offer a much more holistic approach. For instance, for one COPD patient with symptoms unrelated to his COPD, I was able to make a review appointment with the GP the following week.

I then start work on some of my prescribing support tasks. In the local health board, I am part of the prescribing support team, and we meet every two months to plan the projects we are undertaking. On the efficiency side of the work, we carry out medicine switches. In my role in the dispensing practice, I am able to run down stock and then change scripts and write to the patients. This afternoon I note that we have just finished our last supply Lantus; the health board formulary is switching to Absaglar. I change all the necessary scripts and send out new repeat lists to each patient along with a letter of explanation.

Living in a small community has many advantages and disadvantages, and sometimes it feels like work never ends. After I finish work, I go along to the after-school kids club that I help at. One of the children that I review for her asthma is very happy to tell me, 'My cough is much better!' When I stop at the village shop, one of my other patients is delighted to tell me that his new inhaler is actually 'too good!' I wonder what he means! Although these encounters can be very positive, being asked medication queries while at tennis coaching or out for a meal at the local restaurant can be less enjoyable.

At the end of the day, I reflect on the many rewarding aspects of my role in a rural dispensing practice. It is a unique set-up, which I feel should be emulated elsewhere; there are many benefits for both patients and healthcare staff. I am certainly never bored!

COELIAC DISEASE

ARE WE TAKING COELIAC DISEASE SERIOUSLY ENOUGH?

Led by celebrity endorsement, following a gluten-free diet, with its perceived health benefits around weight loss, is a growing trend. Unfortunately, for those with coeliac disease a gluten-free diet is not a lifestyle choice. Failure to comply with a life-long gluten-free diet has the potential to increase the risk of both short-term, and, more worryingly, long-term complications. Advanced Practice Dietitian, Joy Whelan, explores the condition and discusses approaches in its management.

Joy Whelan

Coeliac disease, a life-long autoimmune disorder, which causes the flattening of the villi in the mucosa of the small intestine, is due to the body's response to gluten; a protein that is found in wheat, barley, and rye. It is present in any food or drink made from, or containing, these grains, such as bread, pasta, pizza bases, cereals, flour, cakes, pastry, and biscuits. It can also be found in processed foods, such as soups, sauces, sausages, and ready meals.

Undiagnosed or ongoing deliberate or inadvertent gluten ingestion can lead to short-term issues, such as anaemia or mouth ulcers, due to malabsorption of nutrients, such as iron, vitamin B-12, or folate. Headaches, depression, gastrointestinal issues, such as constipation, diarrhoea, reflux, or heartburn can also occur. Longer-term complications can include osteoporosis and increased risk of fractures, respiratory problems, infertility, neurological problems, lymphoma, or bowel cancer. A strict life-long gluten-free diet is the only current way to manage this disease, despite ongoing research for alternative treatments. (1) It is an effective treatment, where villous atrophy can be reversed, but it is a difficult and challenging diet to follow.

COELIAC DISEASE KEY FACTS

- Coeliac disease, an autoimmune disorder, is due to the body's response to gluten, a protein that is found in wheat, barley, and rye
- The prevalence of coeliac disease is one per cent, with an average diagnosis rate of 0.25 per cent
- It takes an average of 13 years for a diagnosis to be made
- A simple blood test is available to screen for coeliac disease, followed by a duodenal biopsy (the gold standard test for diagnosis in adults)
- A strict life-long gluten-free diet is the only current way to manage this disease
- Cross-contamination is a serious issue when even minimal gluten has the potential to cause a reaction by triggering an autoimmune response
- Long-term follow-up is known to increase adherence and reduce the risk of complications, with dietetic-led coeliac clinics being used as a successful method of review

The increase in those following a gluten-free diet by choice, or to manage symptoms in conditions, such as non-coeliac gluten sensitivity, has created some benefits for those with medically-diagnosed coeliac disease. Due to increased demand there is a wider availability of specialised gluten-free products available in most large supermarkets.

However, the downside that can, and does, occur is in difficulties with eating out, and this is often quoted as the most challenging part of the diet. An increase in those following a gluten-free diet by choice, who then also have the option to choose gluten-containing foods when they appear more desirable, can lead to restaurants not taking it seriously enough with the concept that this 'fad' diet is by choice for everyone. Cross-contamination is a serious issue when even a breadcrumb has the potential to cause a reaction by triggering an autoimmune response. Separate food preparation areas, separate utensils for preparing foods, and separate oil for cooking foods, are all important issues to ensure that cross-contamination does not occur, but are time-consuming and have cost implications for food establishments needing to make a profit. To consider those with coeliac disease as avoiding gluten as a lifestyle choice is not just infuriating, but dangerous, and has the potential to increase the risk of complications. It would be beneficial for the catering industry, health professionals, and the general population to gain a greater awareness of this.

IMPORTANCE OF EARLY DIAGNOSIS AND LONG-TERM FOLLOW-UP OF THOSE WITH COELIAC DISEASE

It is widely accepted that the prevalence of coeliac disease is one per cent, with a diagnosis rate of 0.25 per cent, meaning that an estimated half a million people in the UK are living with undiagnosed coeliac disease. It is also known that it takes an average of 13 years for a diagnosis to be made (1), leading to severe health problems for many people, e.g. in neurological cases, the longer symptoms go untreated, the more likely there will be no, or limited, improvement in the neurological condition. (2) Long-term follow-up of patients with coeliac disease is recommended by National Institute for Health and Care Excellence (3), Primary Care Society of Gastroenterology (4), and British Society of Gastroenterology (5).

Follow-up is known to increase adherence, and improved adherence will reduce the risk of complications, reducing both ill health to the patient, and ultimately cost to the NHS.

SYMPTOMS OF COELIAC DISEASE

- Symptoms of undiagnosed coeliac disease or ongoing gluten ingestion can include:
- Malabsorption of nutrients (such as calcium, iron, vitamin D, vitamin B-12, or folate)
- Headaches
- Depression
- Gastrointestinal issues, such as constipation, diarrhoea, reflux, or heartburn
- Osteoporosis
- Respiratory problems
- Infertility
- Neurological problems
- Lymphoma or bowel cancer

A NORTHERN IRELAND PERSPECTIVE

In the Western Health & Social Care Trust (WHSCT), there's an average of 75 patients newly diagnosed each year.

With the present population of 328,500, and currently 2,100 people registered with coeliac disease, this relates to 0.63 per cent of the population. Therefore, the unanswered question is whether this region has a higher than average diagnosis rate due to increased awareness of the condition, or whether we have a higher incidence than the rest of the UK.

Historically, in the WHSCT Dr Dickey, Consultant Gastroenterologist, reviewed these patients, but with the ever-increasing numbers and demands on the gastroenterology outpatient department, a protocol was developed, and training was undertaken which led to dietetic-led coeliac clinics being set up in 2012. These clinics ran with ongoing support of the consultant gastroenterologist. Temporary funding continued intermittently until this year when recurring funding has now been secured with future plans for this to occur regionally, alleviating pressures in outpatient gastroenterology services across Northern Ireland.

These clinics have been very successful, allowing a medical and dietary review in one appointment. They have significant cost benefits and have had favourable patient feedback. They also have allowed the reengagement of patients lost to follow-up through collaboration with the local Integrated Care Partnership. Access to patient details coded with coeliac disease was provided to update our coeliac database. From this it was established that in the Northern sector of the WHSCT 35 per cent of patients with coeliac disease were lost to follow-up, and they are now in the process of being invited for review.

In addition to numerous studies, results from audit work done in the WHSCT on 179 review patients provide evidence as to why ongoing follow-up has benefits. All adult patients in our trust receive a DEXA bone scan on diagnosis. 53 per cent of patients had a normal initial bone scan, but 47 per cent showed a degree of osteopenia / osteoporosis, needing ongoing treatment and follow-up. These figures are comparable to national figures. (6)

From blood testing at review it was found that, of those already established on their gluten-free diet, 45 per cent had low vitamin D levels, impacting on calcium absorption and increasing risk of osteoporosis. Vitamin D deficiency is also suspected of being a cause of chronic pain. 13 per cent were found to have low iron, B-12, or folate levels. This shows that low blood levels of micronutrients, even in those with treated coeliac disease, is high, and the review process is an important way of detecting and treating such deficiencies. 17 per cent had an abnormal thyroid hormone profile, which included those previously diagnosed with abnormal thyroid function who needed their dose of thyroxine altered, and those with newly-diagnosed thyroid problems.

It was also established from this audit that only 50 per cent of those diagnosed with coeliac disease remain a member of Coeliac UK, the independent charity dedicated to helping those living without gluten. It is well-documented that a lack of follow-up and lack of membership of a coeliac support group affects adherence to the gluten-free diet. (7)

This is a surprisingly low number as all newly-diagnosed patients are provided with advice and an application form to join Coeliac UK at their initial dietetic consultation. Many of these patients at their dietetic review appointment have joined, so the issue appears that membership lapses over time, either through the perception that there is a little benefit, or membership fees are prohibitive. Either way it perhaps calls into question the level of adherence to the gluten-free diet as documented by Bebb. (7)

ROLE OF NHS PROVISION OF STAPLE GLUTEN-FREE FOODS

- Provides an essential role in supporting patients adhere to a strict, life-long gluten-free diet
- Maximises adherence and facilitates the prevention of long-term medical consequences associated with non-adherence to the diet
- Supports individuals in meeting nutritional requirements, as gluten-free foods on prescription are fortified with calcium and B vitamins
- Gluten-free foods on prescription also provide a source of energy, fibre, and iron
- Reduces the financial burden of purchasing gluten-free products
- Ensures equitable access to gluten-free products

ROLE OF COMMUNITY PHARMACY IN IDENTIFYING THOSE AT RISK AND PROVISION OF GLUTEN-FREE FOODS

Community pharmacy has been found, by Coeliac UK, to be an ideal place for identifying those at risk of coeliac disease. Customers accessing over-the-counter or prescription medications for irritable bowel syndrome, or iron, vitamin B-12, or folate deficiencies could be provided with information leaflets accessible from Coeliac UK (1), or encouraged to take an online assessment on the Coeliac UK website, (https://isitcoeliacdisease.org.uk/overview), or those never tested before could be signposted to their GP. They should always be advised not to remove gluten from their diet before testing, and if already removed needs to be reintroduced in more than one meal every day for at least six weeks before testing. (3)

The testing process includes a screening blood test checking for antibodies to gluten, IgA Tissue transglutaminase (tTGA). IgA anti-endomysial antibodies which are more disease specific will be tested automatically when tTGA antibodies are present.

COELIAC DISEASE

Specific IgA deficiency (sIgAD) will be detected by this assay and IgG anti-endomysial antibodies measured if sIgAD is present. Positive blood tests need to be followed up with a duodenal biopsy which remains the gold standard test for diagnosis in adults.

The provision of gluten-free staple foods on prescription plays an essential role in supporting people with this condition to adhere to a life-long strict gluten-free diet. (8)

It aids adherence to the diet (9), helps to meet nutritional requirements (in particular, energy, fibre, iron, and calcium), reduces the long-term complications of non-adherence, reduces the financial burden of purchasing gluten-free products, and ensures access to gluten-free products for those where supermarket availability is limited. (10) Gluten-free prescriptions do have cost implications, but it has been calculated as approximately £195 a year per patient to support such prescriptions. (1) Reducing the complications from long-term non-adherence will produce longer-term significant cost savings, e.g the average cost to the NHS of an osteoporotic hip fracture is £27,000. (11) This is significant given the high risk of osteopenia and osteoporosis in this patient group. 87 per cent of patients with coeliac disease cited that access to gluten-free food on prescription was an important factor in maintaining the gluten-free diet, with 47 per cent citing it as the single most important factor. (12)

SITUATION IN NORTHERN IRELAND

Since prescriptions in England have recently been reduced to allow gluten-free breads and flour mixes only, the Health and Social Care Board in Northern Ireland have clarified their position that prescribing policy remains unchanged and gluten-free food remains available on prescription, with the continuing endorsement of Coeliac UK national prescribing guidance. (12) Staple foods, including bread, bread rolls, crackers, crispbreads, flour/flour mixes/bread mixes, oats, pasta, pizza bases, breakfast cereals and the baking agent, xantham gum, can be prescribed on a monthly unit basis which is calculated based on age, sex, and average energy requirements.

Currently in Northern Ireland each item is listed on prescription, based on a PIP code, involving a GP visit, or receptionist request each time a prescription needs modified.

This is time-consuming, tedious, and is not a cost-effective method. It would be worth considering a regional pharmacy-led scheme in Northern Ireland which would be ideally placed to replace the current prescription process, which is less than ideal, to a more cost-effective and convenient model. A pharmacy supply of gluten-free foods could simplify the process. When a diagnosis of coeliac disease is made, a letter from the dietitian following their initial assessment, detailing the recommended monthly units, could be taken directly by the patient to the pharmacist where agreed products and quantities to be supplied within the guidance could be arranged. The pharmacy could control the gluten-free food supply on a monthly basis. A list of all items currently available on prescription is available on the Coeliac UK website. (1)

SITUATION IN SCOTLAND

In Scotland a Gluten-Free Food Service (GFFS) was developed for adults and children. This centralised NHS gluten-free prescribing service ensures equitable access to gluten-free staple foods across the country for all patients with coeliac disease. Gluten-free foods are accessed by patients directly from community pharmacies which leads to a saving in GP time. Following an 18-month trial period, whereby a reduction in inappropriate prescribing and cost stabilisation has occurred as the number of units was closely monitored, the GFFS was adopted as a permanent service within NHS Scotland in October 2015. (13)

SITUATION IN WALES

In Wales, the national prescribing guidelines are followed nationally, with the government supporting the ongoing availability of prescriptions for staple items to help patients optimise their nutritional status and maintain a healthy, well-balanced lifestyle. (14) The cost of such provision represents just 0.34 per cent of prescription spending in Wales, making it one of the most cost-effective treatments for a long-term condition in the NHS. (15)

REFERENCES

1. Coeliac UK www.coeliac.org.uk
2. Hadjivassiliou M, Sanders DD, Aeschlimann DP, 2015. Gluten-related disorders: gluten ataxia. Dig Dis.; 33(2):264-8
3. National Institute for Health and Care Excellence (NICE) 2015. Coeliac disease: recognition, assessment and management. www.nice.org.uk/guidance/ng20
4. Primary Care Society for Gastroenterology 2012. The management of adults with coeliac disease in primary care
5. Ludvigsson, J.F., et al., 2014. Diagnosis and management of adult coeliac disease: guidelines from the British Society of Gastroenterology. Gut, 2014. 63(8): p. 1210-28
6. McFarlane XA, Bhalla AK, Reeves DE, et al. 1995. Osteoporosis in treated adult coeliac disease. Gut 36:710–714
7. Bebb JR, Lawson A, Knight T and Long RG 2006. Long-term follow-up of coeliac disease – what do coeliac patients want? Alimentary Pharmacology & Therapeutics, 23:827-831
8. www.bda.uk.com/improvinghealth/healthprofessionals/policystatements
9. Hall, N.J., G.P. Rubin, and A. Charnock, 2013. Intentional and inadvertent non-adherence in adult coeliac disease. A cross-sectional survey. Appetite, 68: p. 56-62.
10. National Institute for Health and Care Excellence (NICE) 2016. Coeliac disease quality standard; QS134
11. Coeliac UK, 2017. Consultation Response, The Availability of Gluten Free Foods on Prescription in Primary Care
12. Coeliac UK, et al., 2011 (updated 2012). Gluten-free Foods: A Revised Prescribing Guide
13. www.communitypharmacyscotland.org.uk/nhs-care-services/services/gluten-free-foods (last accessed July 2018).
14. http://record.assembly.wales/WrittenQuestion/2894
15. http://gov.wales/statistics-and-research/prescriptions-dispensed-community/?lang=en (accessed July 2018).

ABOUT THE AUTHOR

Joy Whelan qualified with a Masters in Dietetics in 1996 and has been employed by the Western Health & Social Care Trust, Northern Ireland since 1998. She has a long-standing professional interest and clinical expertise in coeliac disease and works as an advanced practice dietitian where she runs a dietetic-led coeliac clinic service.

juvela

Gluten-Free Fresh Bread Ordering Service

The entire Juvela bread range is made in a dedicated gluten-free bakery.

Delivery every Thursday!

THUR

Order by		for delivery
10am Monday	▶	**Thursday** by **5.30pm**

How to order...

- **028 9079 7458**
- **www.juvela.co.uk/fresh-bread-ordering**
- **via your pharmacy PMR system**
- *Make sure you have your account and pin number*

Juvela Gluten-Free Foods - providing staple gluten-free products to support the dietary management of patients with coeliac disease.

For free samples for your coeliac customer to try, call: **0800 783 1992**
or email: **info@juvela.co.uk**

juvela

UK's favourite essential gluten-free foods

ROOM FOR IMPROVEMENT

Are you up-to-date with the Pharmacists' Defence Association's latest landscape of work – and decision to champion a Safer Pharmacies Charter in response to the surge in stress and strain placed on the profession?

The Pharmacists' Defence Association (PDA) is now one of the largest membership organisations representing individual pharmacists, and the associated PDA Union is the only independent trade union exclusively for pharmacists and pharmacy students in the UK. Last year the PDA launched a Safer Pharmacies Charter in response to workplace concerns raised by many of their 27,000 or so members.

The charter was developed as part of a strand of work prompted by a series of issues over recent years, including the national Guardian newspaper articles about poor working conditions and stress among Boots employees; the results of two membership surveys; the apparent decision of the rebalancing board to support remote supervision; and the tragic case of Alison Stamps. These issues have painted a picture of a healthcare profession under severe and unremitting strain, where corporate profitability has been placed above employee wellbeing and patient safety in some cases.

This charter was drafted with the hope that it would obtain all party support as a key way to promote patient safety by ensuring appropriate, safe working conditions for pharmacists. The charter's development included a workplace pressures workshop in March 2017 which looked at the root causes of workplace stress and identified actions which the PDA Union could undertake to try to support members. The charter itself evolved from the outputs of a 'never work alone campaign' and work on defining a safe staffing policy.

The PDA has also taken other actions on the subject, including forging an alliance with Pharmacy Support and pledging a £1 annual donation to the charity on behalf of every PDA member subscription and the relaunch of their Violence in Pharmacies policy and resource pack.

The charter sets down those commitments which pharmacy contractors and employers should make to ensure that patient safety is put back where it should be – at the centre of all that they do. The charter was launched at the Houses of Parliament and immediately received the endorsement of the UK Labour Party. Since then several other organisations, including Action Against Medical Accidents, have also given the charter their support.

However, it's not clear to what degree pharmacy owners have yet looked at whether or not their operation meets the standards detailed in the charter.

Mark Koziol (right), Chairman of the Pharmacists' Defence Association, with Shadow Secretary of State for Health, Jon Ashworth (left)

THE LOWDOWN

NIHR SPEAKS TO PAUL DAY, DIRECTOR OF THE SPR, AND ALIMA BATCHELOR, HEAD OF POLICY AT THE PDA , IN ORDER TO FIND OUT MORE.

Paul Day said, 'The standards in the charter are basic things which patients would expect to be in place, yet feedback from our members and our survey shows that they are not being met.

SAFER PHARMACIES CHARTER

'This can't continue and those who own or manage pharmacies should be making sure they meet these minimum standards. The regulators have a role to play too and should ensure that every pharmacy, on every occasion, is meeting these safety standards.'

The responsibility of the regulator is something that the PDA has raised before. They are particularly concerned about the General Pharmaceutical Council's (GPhC) lack of action against pharmacies, and highlighted that since inception the GPhC had issued over 3,500 sanctions against individual registrants but had never issued any sanction for a failure to comply with the standards for registered pharmacies.

The charter commitments cover seven basic areas which should be standard practice whenever and wherever pharmacy work is carried out:

- No Self-Checking
- Safe Staffing
- Access to a Pharmacist
- Adequate Rest
- Respect for Professional Judgement
- Raising Concerns
- Physical Safety

These headings are then described in more detail in the charter document, which is available online at www.the-pda.org/safer-pharmacies-charter/support.

PDA members are concerned that while pharmacies are allowed to fail to meet these standards, it is pharmacists who are keeping patients safe by putting themselves into unsafe working conditions.

This places hardworking health professionals and their careers at unreasonable levels of stress and risk.

Around 2,000 pharmacists responded to a PDA survey earlier this year in which they shared their direct recent experience of how often the standards detailed in the Safer Pharmacies Charter were met. For each standard the pharmacists were asked if in their experience the standard was met:

- None of the time (value = 1)
- Minority of the time (value = 2)
- Around half of the time (value = 3)
- Most of the time (value = 4)
- All of the time (value = 5)

This gave the PDA an average score for each standard detailed in the charter, with an overall score of 5.00 meaning that the safety standard was always met, and 1.00 meaning that it was never met.

The overall scores were as follows:

1. No Self-Checking	3.28
2. Safe Staffing	2.85
3. Access to a Pharmacist	4.21
4. Adequate Rest	2.62
5. Respect for Professional Judgement	3.16
6. Raising Concerns	2.66
7. Physically Safe	3.53

Analysis of the survey showed significant concerns including over 50 per cent of respondents saying they did not have adequate rest over half of the time.

The PDA will continue to promote the commitments set out in the charter across the UK nations by undertaking activities such as the promotion of their policy on Violence in Pharmacy; lobbying against proposed measures which will reduce the number of staff in pharmacies, such as Remote Supervision, or allowing responsible pharmacists to be responsible for more than one pharmacy at a time, and responding robustly to relevant consultations, such as the GPhC guidance on the Safe and Effective Pharmacy Team.

Responsibility for safety sits with the pharmacy regulators in Belfast and London, and following the launch of the PDA's Safer Pharmacies Charter last year, a statement from the British pharmacy regulator, the GPhC, claimed that, 'The key points set out in the PDA's charter reflect a number of the standards that we set for registered pharmacies and pharmacy professionals. These standards include making sure that there are enough staff, suitably qualified and skilled, for the safe and effective provision of the pharmacy services provided, that staff can comply with their own professional and legal obligations, and that staff are empowered to raise concerns.'

Alima Batchelor further explained, 'We are disappointed that we have even had to produce a charter of such basic standards, but these survey results and feedback from pharmacists shows why it was needed.

'Our members are passionate about patient safety, however these standards are not something they can directly control; employers need to do more and the regulators need to make sure that they do.'

Keeping patients safe is key to the role of every pharmacist. But less than safe working conditions risk harm to patients, as well as damaging consequences for pharmacists – such as impacting on their physical or mental health. PDA members produced this charter of seven commitments to improve safety and care for patients, through better working conditions in UK pharmacy practice.

Paul Day concluded, 'The commitments in the charter should be standard practice whenever and wherever pharmacy work is carried out. We actively encourage other interested parties to endorse the charter, and those who own or manage pharmacies to adopt the charter and ensure the commitments are fulfilled in their pharmacies.'

CROSSING THE LINE

Continue to bolster your knowledge of NHS Scotland's licensed medicines by checking out the Scottish Medicines Consortium's newest advice.

JUNE 2018

MEDICINE	FOR THE TREATMENT OF...
Everolimus (Votubia)	Epilepsy in patients with tuberous sclerosis complex
Inotuzumab ozogamicin (Besponsa)	Acute lymphoblastic leukaemia
Midostaurin (Rydapt)	Adult patients with newly-diagnosed acute myeloid leukaemia
Crizotinib (Xalkori)	A rare subtype of non-small cell lung cancer
Telotristat ethyl (Xermelo)	Severe diarrhoea associated with a rare condition called carcinoid syndrome which can occur with a certain type of tumour

JULY 2018

MEDICINE	FOR THE TREATMENT OF...
Lutetium oxotretide (Lutathera)	A rare type of tumour type that develops in the gut or pancreas
Tivozanib (Fotivda)	Advanced renal cancer
Atezolizumab (Tecentriq)	Advanced non-small cell lung cancer

THE ROAD TO RECOVERY

Recent years have seen unprecedented increases in the number of drug-related deaths across the UK, with rates now higher than deaths from road traffic accidents. We know that the single biggest factor is the poor physical and mental health of an ageing cohort of people who have been using heroin for several decades, while other insidious contributory factors include poverty, poly-substance use, and chronic use of alcohol and tobacco, the entrenched socio-economic deprivation resulting from decades of 'austerity', and changes to drug treatment and commissioning.

According to national charity, Faces & Voices of Recovery UK, it's time for the recovery community to reclaim the word 'recovery' from politicians and policymakers and ensure that the process is an inclusive and broad highway. How can we help ensure that the responses from our services are better aligned with this lived reality? SPR's Sarah Nelson investigates.

'RECOVERY': AN INDIVIDUAL PATH OR A PUBLIC PURSUIT?

A spiralling reality in society has been many commentators in the field proclaiming that 'recovery' is a failed policy and should no longer be the guiding principle for the commissioning and delivery of services. However, national charity, Faces & Voices of Recovery UK (FAVORUK) – a policy advocacy movement that is taking on issues of discrimination, social justice, and service access – rejects this argument for a number of reasons.

Firstly, according to the organisation, the term 'recovery' was hijacked by politicians a decade ago and redefined to support the welfare reform agenda. Recovery is an individual journey and has to be defined by the individual themselves.

Secondly, while national strategies and policies are now focused on recovery as the guiding principle, very little has actually changed on the ground in professional services – apart from decreased funding and increased workloads.

The majority of support for individuals in long-term recovery continues to come from mutual aid and community recovery organisations, though some professional services now recognise the benefits of positive social networks in recovery and facilitate their clients joining them.

FAVORUK: POWER AND PROOF IN LONG-TERM RECOVERY

FAVORUK's position is very clear: recovery is a lived reality for thousands of people and services must be aspirational for the people who use them. At the same time, recovery will be a long and winding road for many people due to chronic ill health, entrenched trauma, and the lack of any social capital – the primary response of services must thus be to keep these people alive and support them to improve their health and wellbeing.

A continuum of evidence-based interventions exists, from needle exchange and heroin-assisted treatment, to 12-step facilitation – and all of them will benefit different individuals at different times. Let us not throw out the baby with the bathwater – recovery must be the guiding principle of treatment services, but the road to recovery often begins with safer injecting advice and clean needles and may or may not lead to long-term abstinence recovery.

Recovery will continue to happen round kitchen tables, coffee shops, church basements, gyms, educational establishments and many other places that our healing and restoration takes us – as it always has, and as it always will.

THE UK RECOVERY DECLARATION OF RIGHTS

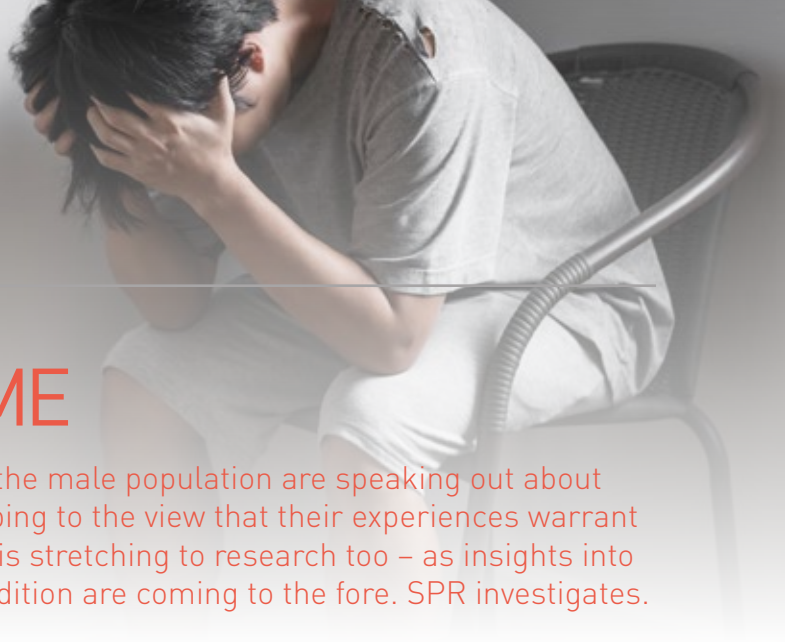
The UK Recovery Declaration of Rights was inspired by a real need to have a tool that focused on the rights of individuals and families seeking, entering, and living beyond treatment.

FAVORUK spent a year travelling through England, Northern Ireland, Scotland, and Wales, holding consultations with many varied groups. Subsequently, those in treatment, harm reduction, and mutual aid communities, professionals and families, people who currently and formerly used substances; together created the Declaration of Rights in response to funding restrictions and increasing drug-related deaths, representing their determination to take a step forward and to make their voices heard. The collective hope is that this Declaration of Rights will galvanise all concerned and contribute to improving the lives and health of those with substance use disorder.

The take-up of endorsements and support for this piece of work has been unprecedented in that at the time of writing 101 organisations across the UK have signed up. There is also interest from Scottish MPs to raise a motion to debate it in parliament. It is also currently in the process of being distributed to MPs across the UK to endorse and uphold in their constituencies. To say that this is an incredible achievement and a much-needed piece of work is an understatement.

Faces & Voices of Recovery UK is a registered charity number SC043961 and is entirely dependent on donations and voluntary fundraising.

For more information, visit www.facesandvoicesofrecoveryuk.org.



NO SENSE OF SHAME

A taboo topic no more, a greater portion of the male population are speaking out about erectile dysfunction, and no longer subscribing to the view that their experiences warrant secrecy and shame. This enlightened state is stretching to research too – as insights into the likelihood and consequences of the condition are coming to the fore. SPR investigates.

ERECTILE DYSFUNCTION: THE BASICS

Rob Cornes, a Male Cancer Information Nurse at Orchid, a UK charity working on behalf of anyone affected by or interested in male cancer, tops up our awareness of impotence, and answers a few of the questions which are most likely to be posed by patients.

WHAT ARE THE FUNDAMENTAL CAUSES OF ERECTILE DYSFUNCTION?

Cardiovascular disease, diabetes, and cancer treatment. As men age, their levels of testosterone can also drop.

HOW MAJOR OF A RISK IS IT FOR THOSE CONTENDING WITH PROSTATE CANCER?

Any form of surgery or radiotherapy to the prostate gland is likely to cause a degree of erectile dysfunction. This occurs as nerves which control erections are situated adjacent to the prostate gland.

Hormonal therapy for more advanced prostate cancer will reduce testosterone and cause impotence.

If someone has an orchidectomy (testicle removed) then, providing the other testicle is functioning normally, there should not be any effect on function. However, 90 per cent of testosterone is produced in the testicles and further treatment, such as chemo-therapy, may affect testosterone levels, reducing them which will cause potential dysfunction. However, in this situation testosterone replacement therapy can be given.

WHAT ARE THE MAIN BRANCHES OF TREATMENT?

The main treatment tends to revolve around medication, as well as topical treatments which can be applied to the penis to stimulate erection. There are also injections which can be self-administered and vacuum pump devices which have been specially designed to help create and maintain erections.

HOW SUBSTANTIAL OF AN IMPACT DOES ERECTILE DYSFUNCTION AND PERFORMANCE ANXIETY HAVE ON MALE MENTAL HEALTH? HOW CAN HEALTHCARE PROFESSIONALS HELP?

Psycho sexual counselling can be provided; professional counsellors who can talk to both partners to work through any anxieties or previous psychological impact.

IS THERE ANY NEW RESEARCH IN THE AREA OF MALE CANCER WHICH WE SHOULD BE IN THE KNOW ABOUT?

Surgical and radiation treatments are being refined to reduce potential impact on areas such as the nerves around the prostate, but there is still likely to be some minor effect on erectile dysfunction.

For more information on erectile dysfunction, visit the Orchid website at www.orchid-cancer.org.uk/prostate-cancer/erectile-dys-function.

A CHANGE OF HEART

Despite rarely receiving attention for its role as a risk factor for cardiovascular (CV) disease, erectile dysfunction boasts a long-time association with the condition – with both demonstrating multiple overlapping mechanisms.

Compelled to explore the interlacing of cardiovascular disease and erectile dysfunction, an article entitled, 'The Relationship of Erectile Dysfunction and Subclinical Cardiovascular Disease: A Systematic Review and Meta-Analysis' has been published in the journal, Vascular Medicine.

When it comes to the future footing of treatment, the research is enlightening, as the researchers reported a significant association of erectile dysfunction with impaired endothelial function (measured by brachial flow-mediated dilation using ultrasound), a marker of the ability of blood vessels to relax that is an early event in vascular disease development. Additionally, erectile dysfunction was associated with increased carotid intimal medial thickness (carotid IMT), an early manifestation of atherosclerosis.

As explained by the authors, 'Our study findings indicate that [young] men [with erectile dysfunction] are at greater risk of having identifiable subclinical CV disease and will benefit from an active CV disease work-up... Our study supports a more aggressive CV disease risk assessment and management for persons with erectile dysfunction, including young men who may otherwise be categorised as low risk due to their young ages.'

Further delving in to the complexity of impotence and cardiovascular health, when asked by SPR, Emily McGrath, Senior Cardiac Nurse at the British Heart Foundation, shared, 'Erectile dysfunction can be a symptom of coronary heart disease. This is because blood flow to the penis can be restricted by the build-up of fatty deposits in the arteries called plaques. Because the arteries in the penis are so narrow, erectile problems are often one of the first warning signs of blocked arteries, which increases your risk of having a heart attack or stroke.

'If anybody is worried about erectile dysfunction, they should book an appointment with their doctor as it's important to find and treat any underlying medical condition as soon as possible.'

VITAROS®
URETHRAL ALPROSTADIL CREAM

VITAROS® IS THE ONLY URETHRAL ALPROSTADIL IN A CREAM[1-3]

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**

- **VITAROS®** works when the cream is applied directly into the urethra[3–5]
- **VITAROS®** works when stored in a refrigerator between 2-8°C[4] immediately after purchase
- **VITAROS®** works with prolonged use and may be applied up to 3 times per week[4,5]*
  - Use of **VITAROS®** 8 times a month provides noticeable results, with continued use associated with increased efficacy vs baseline[5]

If clinicians believe more than one treatment a week is appropriate to treat ED in their patient, this can be prescribed on the NHS[6,7]

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**

*Only once per 24 hour period

References: 1. Moncada I and Cuzin B. *Urologia* 2015;82(2):84–92. **2.** Cuzin B. *Ther Adv Urol* 2016;8(4):249–256. **3.** Padma-Nathan H and Yeager JL. *Urology* 2006;68:386–391. **4.** VITAROS® Summary of Product Characteristics 2016. Available at: https://www.medicines.org.uk/emc/medicine/28866. Date accessed: July 2018. **5.** Rooney M, *et al. J Sex Med* 2009;6:520–534. **6.** NHS Executive. Health Service Circular. 1999. Available at: http://webarchive.nationalarchives.gov.uk/20121012055159/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4012086.pdf. Date accessed: July 2018. **7.** National Institute for Health and Care Excellence. Clinical Knowledge Summaries. Erectile dysfunction. December 2017. Available at: https://cks.nice.org.uk/erectile-dysfunction#!uptodate. Date accessed: July 2018.

Name of product: Vitaros® (urethral alprostadil cream) **Composition:** Alprostadil 300 micrograms in 100mg of cream (3mg/g). Indication: Treatment of men ≥18 years of age with erectile dysfunction. **Dosage & Administration:** Vitaros® is applied into the opening at the tip of the penis (meatus) 5 to 30 minutes before attempting intercourse. Bring the contents of the single-dose container to room temperature by rolling the container between the hands and twist the plunger several times to make sure it will glide easily. The tip of the container should be placed as close as possible to the opening at the tip of the penis for the cream to go down the urethra. Do not insert the tip of the AccuDose™ container into the opening of the penis. Any excess cream covering the opening at the tip of the penis should be gently moved into the opening with the tip of a finger. Use as needed to achieve an erection to a maximum frequency of once every 24 hours and no more than 2-3 times per week. Vitaros® Accudose™ container is for single use only. **Contraindications:** Should not be used in patients with orthostatic hypotension, myocardial infarction, syncope, abnormal penile anatomy, urethritis, balanitis, tendency to thrombosis, hyperviscosity syndrome, underlying conditions that may predispose them to priapism, known hypersensitivity to alprostadil or any excipients. Should not be used in patients for whom sexual activity is inadvisable (men with unstable cardiovascular or cerebrovascular conditions). A condom must be worn for sexual intercourse with a woman who has child bearing potential. **Special Warnings & Precautions:** 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. Inadvertent intraurethral 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:** 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 increased cardiovascular risk cannot be excluded. Possible risk of priapism if used in combination with a penile implant or smooth muscle relaxant. Possible increased risk of hypotension (especially in elderly) when administered in combination with antihypertensive drugs and vasoactive medications. The effect of Vitaros® may be reduced if administered concomitantly with sympathomimetics, 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, <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. **Legal Classification:** POM. **Marketing Authorisation Number:** PL 03194/0125. **Marketing Authorisation Holder:** Ferring Pharmaceuticals Ltd. Drayton Hall, Church Road, West Drayton, UB7 7PS, UK. Vitaros® is a registered trademark. **PI Approval Code:** VIT/1429/2018/UK(1). **Date of Preparation:** July 2018

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 Ferring Pharmaceuticals Ltd. Tel: 0800 111 4126. Email: medical.uk@ferring.com

FERRING PHARMACEUTICALS

July 2018 I VIT/1969/2018/UK

IT'S ABOUT TIME

The recent news that well-known figures such as actor Stephen Fry, television presenter Bill Turnbull, and former Scotland rugby internationalist John Rutherford have all made their diagnosis of prostate cancer public has thrust the issue of a once not-often-talked-about topic much more into the general domain. With over 40 per cent (1) of men likely to be affected by Benign Prostatic Hyperplasia, Prostate Scotland's Adam Gaines sheds light on the pharmaceutical and surgical techniques which are helping fuel our efforts in taking on the common killer.

Credit: Sandy Young

Many pharmacies across the country will be long used to dispensing prescriptions for men for alpha blockers for the effects of Benign Prostatic Hyperplasia, particularly in recent years as pharmacies have also been involved in counselling and prescribing men with over-the-counter Tamsulosin.

One-in-10 men in Scotland are at risk of prostate cancer – and in 2016, 3,167 men were diagnosed in Scotland with prostate cancer and 894 men died from it. (2) NHS Scotland predictions suggest that the prevalence of prostate cancer is likely to increase by some 35 per cent over the next 10 years.

Encouragingly, survival rates among men with prostate cancer have increased over the past two decades, with over 80 per cent of men with prostate cancer now surviving it (3) (five years or more).

This welcome improvement is down to better diagnosis and more effective treatments.

TRANSFORMATIONAL TREATMENT

We have seen an increase in the range of treatments for prostate cancer in recent years –and, depending on the circumstances, these can include surgery, radiotherapy, and / or hormone treatment. We have also seen the recent introduction into Scotland of the most advanced form of surgery for early prostate cancer – robot-assisted surgery – following a successful partnership of the charity, Prostate Scotland, the Scottish government, and NHS health boards.

There has also been significant developments in the treatment of advanced prostate cancer in the past few years. These have, in many instances, led to increased survival time, and increased quality of life for many men with advanced prostate cancer, as well as leading to significant changes in the treatment pathway. Hormone therapy remains the mainstay treatment for advanced prostate cancer, but there have now been substantial advances.

PHARMACEUTICAL ADVANCES

Most of these developments have been of a pharmaceutical nature and have therefore certainly kept the Scottish Medicines Consortium busy. Abiraterone and Enzalutamide are two of these drugs. They are both novel hormone treatments that work in a different way from other hormone therapies, by reducing the production of, or blocking, the action of testosterone. These are now available in Scotland for men with advanced prostate cancer before or after chemotherapy where standard hormone therapy has failed.

In the West of Scotland, these drugs are starting to be dispensed in the community.

One of the other key developments has been a significant change in the role of chemotherapy for advanced prostate cancer. Until about 10 years or so ago chemotherapy was not very well-known or utilised for advanced prostate cancer, and has until recently been used as a second-line treatment when hormone therapy had ceased to be effective.

However, the findings of a recent major study (4), the STAMPEDE trial, has led to significant change, as it found that men who had Docetaxel in addition to standard (hormone) treatment lived 10 months longer than men who had standard treatment alone, and they also had more time before their disease progressed. This has led to many men with advanced prostate cancer now being offered chemotherapy alongside hormone therapy at the point when they are first diagnosed with metastatic prostate cancer.

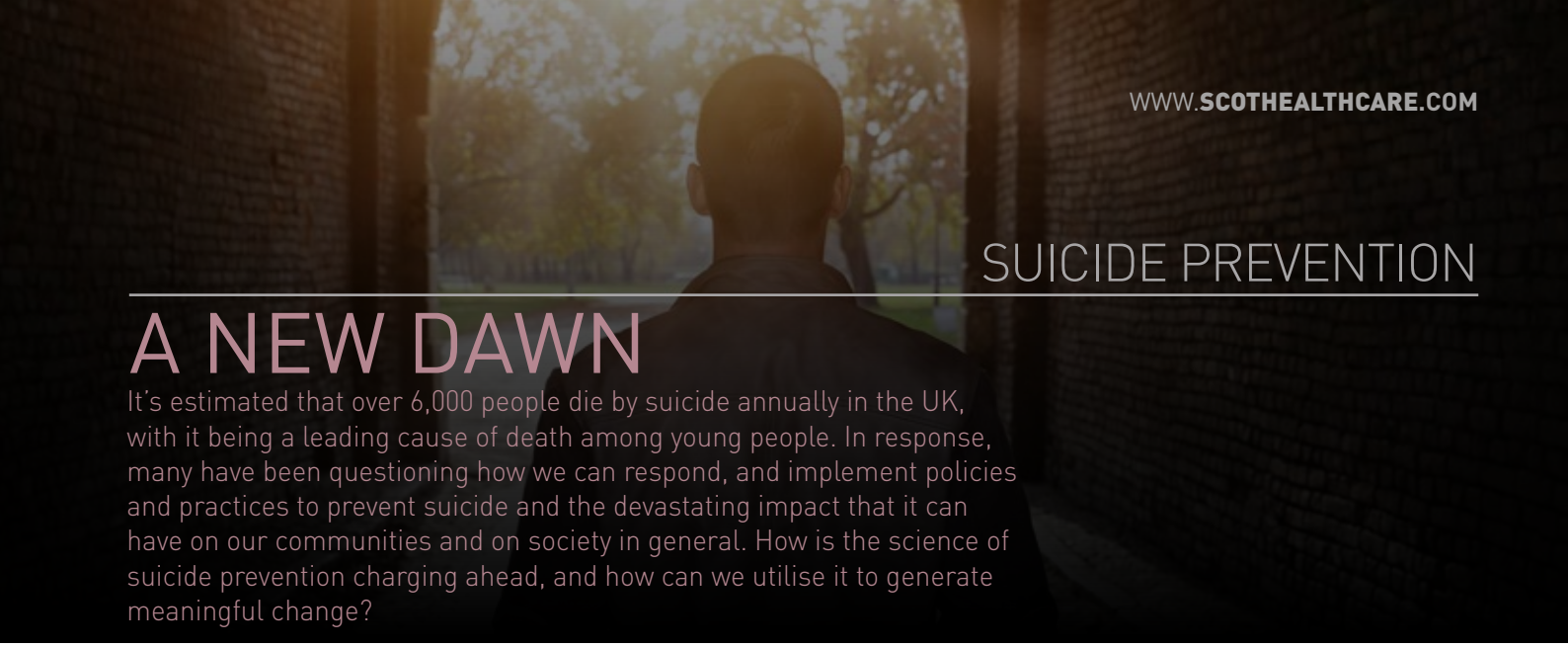
IT'S JUST THE BEGINNING

While it is very welcome that treatment improvements and availability continues, there remains a real need to increase awareness of prostate cancer and disease.

Prostate Scotland has produced a range of free information for patients and clinicians about prostate cancer and disease, including handy leaflets to go in pharmacies for patients. For copies, email info@prostatescotland.org.uk, or visit www.prostatescotland.org.uk.

REFERENCES

1. WM Garraway et al High Prevalence of benign prostatic hypertrophy in the community – The Lancet 1991, 338, 469-471, also Kirby – The Prostate – small gland big problem 2002
2. See Cancer Statistics ISD NHS National Services Scotland Cancer in Scotland April 2018
3. Cancer in Scotland: ISD, NHS National Services Scotland, October 2017
4. See the Lancet volume 387 19–25 March 2016, Pages 1163-1177



A NEW DAWN

It's estimated that over 6,000 people die by suicide annually in the UK, with it being a leading cause of death among young people. In response, many have been questioning how we can respond, and implement policies and practices to prevent suicide and the devastating impact that it can have on our communities and on society in general. How is the science of suicide prevention charging ahead, and how can we utilise it to generate meaningful change?

Suicide rates vary across the UK – in recent years Scotland recorded higher suicide rates than other regions (peaking at around 19 deaths per 100,000), however these rates have declined. Northern Ireland currently has the highest rate of suicide in the UK (around 16 per 100,000), and there is concern about the further impact of these deaths on a population emerging from conflict.

The science of suicide prevention is moving forward at a rapid pace and in 2019, on 17th to 21st September, Derry-Londonderry will host the world congress of the International Association for Suicide Prevention (IASP). The members of IASP include research leaders and experts in suicide prevention, people who treat those who are suicidal, and those who develop and evaluate social policies to reduce suicide rates at a population level. The discipline is comprised of passionate and committed professionals at every stage of their career, from student researchers and clinicians, to experts who have led and shaped suicide prevention initiatives internationally for decades.

For many of those involved the topic has personal, as well as professional, significance, and the voice of those with lived experience of suicidal thoughts, and grief, is given prominence. The conference allows participants from all over the world to hear about what is, and is not, working in other places, and to present their research to their peers. Conferences such as these enable key conversations to happen and are vital in moving the discipline forward and shaping policies and services to save lives.

THE POWER OF DISCOVERY

Suicide prevention is a complex science because suicide results from a behaviour that in turn is influenced by numerous factors.

The IASP conference theme, 'Breaking Down Walls and Building Bridges', is a theme that not only resonates with the landmarks in the city, but also reflects the work undertaken in suicide prevention. What we do on an individual basis with those who suffer is often about connecting with and supporting people in pain and building hope for the future.

However, we are still learning about the best ways of addressing suicide and supporting those who are bereaved, because we know that they too experience suicidal pain. Certainly our endeavours have revealed more 'known unknowns'; for example, we remain unable to accurately predict who will die by suicide, and we now know that simply treating mental illness may not reduce suicidal suffering.

The conference will discuss research related to treatment innovations, and the specific techniques that may be used to address suicidal thoughts and behaviours, and how and why they work.

TAKING ON TRAUMA

Suicide, trauma, and conflict is another important theme, and it reflects the links between suicide and exposure to violence, such as that witnessed by many in Northern Ireland. The research can help us understand the links, and conferences, such as IASP2019, facilitate the conversations to generate ideas about how we might prevent suicide in populations such as ours.

Suicide impacts upon all age groups, and the conference will have sections covering both suicide in the ageing population, and also suicide and self-harm in young people. It will look at suicide prevention methods for vulnerable groups with particular types of mental health concerns or situational crises, and socially marginalised groups, such as people who identify as lesbian or gay.

The social factors that can lead to suicide are considered within several conference themes. Research on social trends, such as the use of social media, and the impact of technology, will be discussed, alongside strategies to improve personal and population resilience.

GETTING THE MESSAGE ACROSS

While many people believe that much of the suicide prevention work is undertaken by mental health professionals, the reality is that almost three-quarters of those who die by suicide in Northern Ireland are not considered to be mental health service users. Many have serious untreated mental illnesses, and research on ways of promoting help-seeking behaviour is important to address these issues.

In a broader sense, public health campaigns, media messages, stigma, and help-seeking will be considered as these are fundamental ways in which hearts and minds can be changed to encourage people to seek alternatives to suicide. The factors influencing individual suicidal behaviour are unique and complex, and the team looks forward to welcoming the hundreds of delegates to their city next year to promote the message of suicide prevention and move the discipline forward to save lives, change lives, and create a better future for the next generation.

ARTICLE CONTRIBUTORS

- Professor Siobhan O'Neill, Professor of Mental Health Sciences – Ulster University
- Barry McGale, Suicide Prevention Consultant – Suicide Bereavement UK
- Professor Rory O'Connor, Professor of Health Psychology – University of Glasgow

IASP is the International Association for Suicide Prevention – an organisation dedicated to preventing suicidal behaviour and providing a forum for mental health professionals, crisis workers, suicide survivors, and other people in one way or another affected by suicidal behaviour.

For more information, visit www.iasp.info.

IASP World Congress 2019 will take place in Derry-Londonderry on 17th to 21st September 2019.

Full conference details are available by visiting www.iasp2019.com.

For more information, contact Greg Carew, Abbey Conference & Events.

A PAIN IN THE TECH

Turn the page of a newspaper, or switch on the nightly news, and it's likely you'll see the millennial 'mystery' addressed, as researchers attempt to identify just what makes this demographic cohort tick. One widely-accepted observation regards the group's social media habits – and reliance on having access to information at the touch of their fingertips. However, this online connection, and the merits of its convenience, comes at a painful cost.

AS SEEN ON SCREEN

Since the announcement of its release by Steve Jobs in 2010, the iPad has produced a new communication pathway; a fuss-free source for how we locate different material; and, simultaneously, a host of problems for its users. In particular, 'iPad neck' – a persistent pain in the neck and upper shoulders caused by slouching or bending into extreme positions while using tablet computers – is a growing problem, and the basis for a recent study published in the Journal of Physical Therapy Science.

The findings secured by the University of Nevada, Las Vegas (UNLV), research show that:

- 'iPad neck' – sometimes referred to as 'tablet neck' – is usually associated with sitting without back support, such as on a bench or on the ground, or slumping over the tablet while it rests in the user's lap. Other postures significantly associated with pain included using tablets while lying on the side or back
- The condition is more prevalent among young adults than older adults
- Those with a history of neck and shoulder pain reported experiencing more neck and shoulder symptoms during tablet computer use
- The most frequently reported symptoms were stiffness, soreness, or aching pain in the neck, upper back / shoulder, arms / hands, or head. Most (55 per cent) reported moderate discomfort, but 10 per cent said that their symptoms were severe, and 15 per cent said it affected their sleep

Representing the rate at which the effects of technology like this may take its toll, UNLV Physical Therapy Professor, Szu-Ping Lee, lead author of the study, said that the results concern him – especially given the growing popularity of tablet computers, e-book readers, and other connected devices for personal, school, and business purposes.

'Such high prevalence of neck and shoulder symptoms, especially among the younger populations, presents a substantial burden to society,' he commented.

A GENDER ISSUE?

Casting a light on the suffering of females which may be induced by their technology obsession, it's been revealed that women were 2.059 times more likely to experience musculoskeletal symptoms during iPad use than men.

According to the researchers, the pain disparity among genders might be explained by size and movement differences in that women's tendency to have lower muscle strength and smaller stature (for example, shorter arms and narrow shoulders) might lead them to assume extreme neck and shoulder postures while typing.

THE RIGHT CALL

When extending a helpful hand to patients as to how to ease the muscular pain instigated by this tablet and smartphone usage, Professor Szu-Ping Lee suggests distributing the following advice:

- Sit in a chair with back support
- Use a posture reminder device. Also known as 'posture trainers' or 'posture coaches', these small, wearable devices adhere directly to the skin or clip on to clothing and beep to let you know when you're slouching
- Take a stand. Place your iPad on a stand (rather than a flat surface) and attach a keyboard in order to achieve a more upright posture when using your tablet
- Exercise to strengthen neck and shoulder muscles. This is particularly important for women who experience neck and shoulder pain

HOLD THE PHONE

Published towards the end of last year, Deloitte's seventh annual mobile consumer survey, State of the Smart, provides us with a comprehensive insight into device usage habits of 4,150 16-to-75-year-olds who are UK smartphone owners.

As demonstrated by the data, muscle pain in this form is one for caution, and shows no sign of abating, due to these revelations:

- 85 per cent of respondents – 41 million people – now own or have access to a smartphone
- More than half admit to using their phone while walking; 4.5 million while crossing the road
- 55-to-75-year-old 'silver swipers' are the fastest-growing adopters of smartphones
- More than half (53 per cent) of 16-to-75-year-olds in the UK use their smartphones while walking

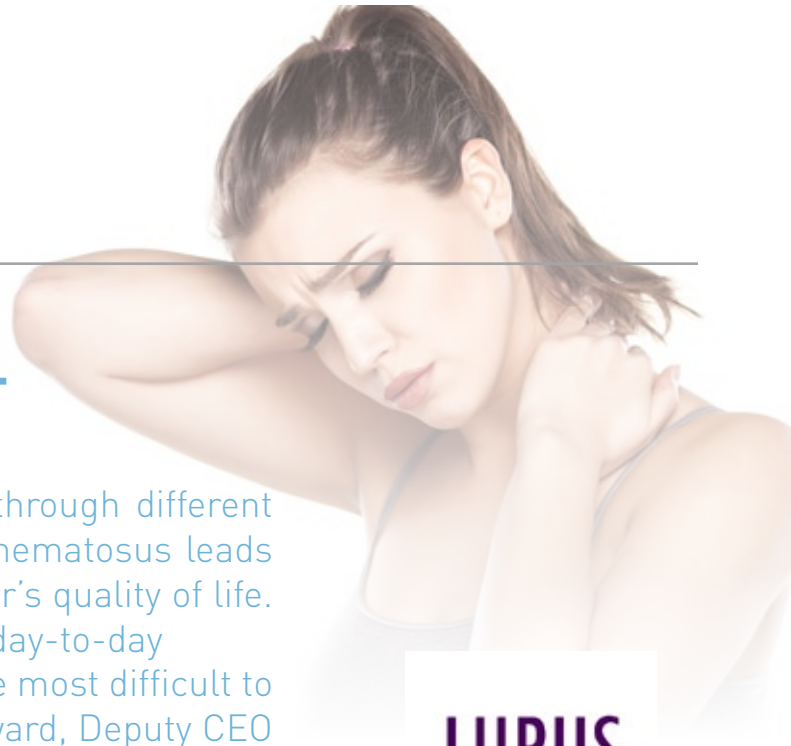
CLINICALLY **PROVEN** TO BE AS **FAST** AND **EFFECTIVE** AS IBUPROFEN PILLS*

Fast, targeted relief for joint, muscle and back pain

To stock up contact your Dendron account manager on 01923 205704

Ibuleve.com

Contains ibuprofen. Always read the label. *Based on soft tissue injuries. Compared to ibuprofen 400mg tablets. IBULEVE Trademark and Product Licence held by Diomed Developments Ltd, Hitchin, Herts, SG4 7QR, UK. Distributed by DDD Ltd, 94 Rickmansworth Road, Watford, Herts, WD18 7JJ, UK. Indications: For the relief of backache, rheumatic and muscular pain, sprains and strains. Also for pain relief in non-serious arthritic conditions. Legal categories: P for Ibuleve Gel and Ibuleve Maximum Strength Gel, and GSL for Ibuleve Speed Relief Gel, Ibuleve Speed Relief Spray and Ibuleve Speed Relief Max Strength Gel. Further information is available from DDD Ltd, at the address above.



A SORE SPOT

Ranging in severity, and indicative through different presentations, Systemic Lupus Erythematosus leads to a long-term impact on the sufferer's quality of life. But it's the multi-system disorder's day-to-day creation of chronic pain which can be most difficult to quantify. With this in mind, Paul Howard, Deputy CEO at Lupus UK, talks to SPR about this battle, and the array of techniques available that can take the patient's pain from hindrance to enhancement.

CAUSES OF PAIN IN LUPUS

ARTHRALGIAS AND MYALGIAS

90-to-95 per cent of people with Systemic Lupus Erythematosus (SLE) – lupus – will experience muscle and / or joint pain.

Arthralgias are pains in the joints, and myalgias are pains in the muscles. The ending '-algia' comes from the Greek word for 'pain', and these pains will often be termed 'polyarthralgias' and 'polymyalgias' as well ('poly-' means 'many'). Experiencing arthralgias and myalgias does not necessarily mean that there is actual arthritis (actual inflammation or damage in the joints) or muscle inflammation.

The doctor may not see any evidence of inflammation on examination. If a patient just has achy joints (arthralgias) without having actual inflammation of the joints (arthritis), doctors usually prescribe pain-relievers for treatment. These include paracetamol, non-steroidal anti-inflammatory drugs (NSAIDs; such as ibuprofen and naproxen), or other analgesics, such as tramadol.

ARTHRITIS

About 50 per cent of people who have SLE will develop actual inflammation of the joints – the medical term for this is arthritis. Fortunately, the arthritis of lupus is usually not crippling or deforming (with the exception of Jaccoud's arthropathy).

Rheumatologists treat lupus arthritis with NSAIDs, steroids, and hydroxychloroquine. Sometimes doctors may need to prescribe stronger immunosuppressant medicines. The goal of treatment is usually to decrease the pain, stiffness, and swelling to acceptable levels.

TENDONITIS

Just as lupus can cause inflammation of the joints, it can also cause inflammation of the tendons (tendonitis). Tendonitis usually causes pain around and between the joints of the body, sometimes causing swelling as well. Some examples of tendonitis that can occur in lupus include:

- Rotator cuff tendonitis (at the shoulder)
- Epicondylitis at the elbow (commonly called tennis elbow and golfer's elbow)
- Flexor tenosynovitis in the palm of the hand (also called trigger finger)
- Achilles' tendonitis (back of the ankle)
- Plantar fasciitis (bottom of the heel)

Just as in arthritis, the tendonitis of SLE is treated with NSAIDs, steroids, and hydroxychloroquine, while stronger medications, such as methotrexate, are used for difficult cases. Resting the tendon to allow the body to heal is one of the most important things to learn to do. An injection with a corticosteroid is also one of the safest and quickest ways to treat tendonitis. Using an ice pack as needed can also help to decrease the severity of the pain from tendonitis.

MYOSITIS

Myositis refers to inflammation of the muscles caused by a direct attack of the immune system; it can occur in 10 per cent of people who have SLE. Although there may be some achiness in the muscles (myalgias), actual muscle weakness is the more common symptom. If myositis occurs in people who have lupus, doctors usually treat it with steroids, but they sometimes use immunosuppressant drugs. If a person just has achy muscles (myalgias) without having actual inflammation of the muscles (myositis), they are treated with pain-relievers, such as paracetamol, NSAIDs, or other analgesics, such as tramadol.

FIBROMYALGIA

Not all joint and muscle pain is due to the inflammation of lupus – about 20 per cent of all people who have lupus will develop a condition called fibromyalgia. Fibromyalgia is due to a chemical imbalance problem of the pain nerves of the body, and the treatment of it is completely different from the treatment of lupus arthritis. Instead of using anti-inflammatory medicines, doctors use medicines that reverse the chemical imbalances (such as antidepressants and anti-seizure medicines). Exercise and improving sleep are also important in the treatment of fibromyalgia.

Some common symptoms that can point to the possibility of having fibromyalgia include having pain 'all over'; having tenderness of the muscles, bones, and skin; headaches; waking in the morning feeling like you did not get much sleep; and feeling tired and fatigued. It is extremely important to identify it as a cause of pain when it occurs to ensure that it is treated appropriately.

DEPRESSION AND ANXIETY

It can be difficult to convince someone that depression and anxiety disorders can cause pain. People can be resistant to the notion of taking an antidepressant or an anti-anxiety medicine to treat their joint or muscle pain. However, in depression and anxiety disorders, body pain is a very common problem. The treatment of choice is to use medicines that reverse the chemical imbalances that are causing the depression, anxiety, and pain. Pain medicines, anti-inflammatory medicines, and steroids should not be used in these cases.

VIRAL INFECTIONS

Viral infections can also cause joint and muscle pain. If the patient gets a fever and has a lot of achiness, it could be due to lupus, but they need to see a doctor right away and be evaluated to make sure that it isn't an infection as well.

NON-PRESCRIPTION TREATMENTS

Since the vast majority of people who have SLE will get aches and pains due to their lupus, it is very important to learn how to control them. There are things which the patient can do on their own without relying completely on prescription medicines to gain control.

JOINT PROTECTION

General joint protection techniques which can be recommended to sufferers include:

- Respect pain; pain should warn you to decrease and avoid certain activities
- Maintain strength and range of motion (see exercise)
- Balance work and rest
- Decrease effort during tasks when using the painful part of your body
- Avoid body positions that cause pain
- Use stronger, larger joints whenever possible
- Avoid staying in one position for too long
- Avoid activities that can't be interrupted, such as standing in long lines or carrying a package for a long distance

EXERCISE

A very important part of the treatment of joint and muscle pains is exercise. Due to the discomfort that may occur in lupus, many people are not able to be as active as they were before; they can lose muscle mass, strength, and joint flexibility, preventing them from doing certain activities. This can lead to deconditioning of the muscles of the body and cause even more aches and pains to develop. This becomes a vicious cycle where the pain leads to less activity; less activity causes loss of function and more pain, and so on.

Numerous studies show that people who have arthritis who force themselves to exercise regularly actually have less pain overall, develop more muscle mass, are able to do more activities, and have a better quality of life. Not only does exercise help with pain and function, but it has other benefits, such as keeping weight under better control, decreasing the chances of developing strokes and heart attacks, and helping with mood in people who have problems with depression.

OVER-THE-COUNTER MEDICINES

There are medications that are available over the counter that the patient can safely use to help control pain. It is very important that they read the package instructions thoroughly. Also, they must check with a doctor first to make sure that the medicine is safe to use in light of any other medical problems which they may have, and to ensure it is safe to use with other medications.

Remind them to never take over-the-counter medicines without doing this first; otherwise there is always the potential risk of drug interactions.

HEAT AND COLD

Heat and ice are commonly used to treat pain and to reduce swelling, and many people have found them effective. In general, when used sensibly, they are safe treatments which make people feel better and have some effect on pain levels and there are few harmful effects associated with their use. Heat treatments, such as heating pads or warm baths, tend to work best for soothing stiff joints and tired muscles. Heat enhances circulation, delivering nutrients to joints and muscles. It's good for getting the body ready for exercise or activity. Cold is best for acute pain; it restricts blood vessels, slowing circulation, and reducing swelling. It also numbs nerve endings, dulling pain.

ADDITIONAL NHS SERVICES

HOSPITAL PAIN CLINICS

There are around 300 pain clinics in the UK – most are in hospitals and have teams of staff from different medical areas, including occupational therapists, psychologists, doctors, nurses, and physiotherapists.

Pain clinics vary, but usually offer a variety of treatments aimed at relieving long-term pain, such as painkilling drugs, injections, hypnotherapy, and acupuncture.

PAIN MANAGEMENT PROGRAMMES

Pain management programmes are a series of sessions, for groups of six-to-eight people, aimed at teaching them how to live with their pain. Instead of treating it, they learn to cope with it and, research shows, can expect to enjoy a better quality of life, sleep, and mobility afterwards. It should be noted that the techniques practiced in pain management programmes may not be effective for everyone.

Some hospital pain clinics offer pain management programmes, and some are held within GP surgeries. As with pain clinics, patients need a referral to join a pain management programme from a GP or hospital specialist.

OCCUPATIONAL THERAPY

Occupational therapy provides support to people whose health prevents them from doing the activities that matter to them. An occupational therapist can identify strengths and difficulties which they may have in everyday life and will help them to work out practical solutions.

They can work with patients to identify goals that can help them to maintain, regain, or improve their independence by using different techniques, changing their environment, and using new equipment.

For more information, email headoffice@lupusuk, call 01708 731 251 or visit www.lupusuk.org.uk.

RHEUMATOID ARTHRITIS: CAUSE FOR A PREGNANT PAUSE?

From the duration of planning, and attempts to conceive, to the delivery process, and potential post-birth problems, the association between rheumatoid arthritis and pregnancy can seem like an unexplored minefield for parents-to-be. Gleaning new insights with the help of the latest research and industry experts, SPR's Sarah Nelson translates this confusing relationship into clarity for both you and your patients.

THE EXPERT'S VIEW

National Rheumatoid Arthritis Society's Information and Support Manager, Victoria Butler, addresses the common concerns which impending pregnancy can prompt in those with rheumatoid arthritis, and the various guises symptoms may take.

Rheumatoid arthritis (RA) patients can experience problems trying to start a family, during pregnancy, and in being able to breastfeed, so need support from their healthcare team with every step of the journey into parenthood.

One of the common times for people to develop RA is shortly after giving birth. For some patients, they may have therefore been perfectly healthy before and during their pregnancy, but may experience pain, stiffness, swollen joints, and problems with grip due to the onset of RA, which can make looking after, and even holding, their baby difficult. Childbirth appears to trigger RA for some – even if it is not their first child.

For those with pre-existing RA, a decision to try for a baby, for both potential mum or dad, can involve having to stop or change medication, sometimes for months before they can even start trying to conceive. Coming off of medication is likely to cause symptoms to worsen or return, which can make sex difficult, and advice on pain relief and finding comfortable positions etc. can be helpful (see our booklet: Emotions, Relationships and Sexuality).

Around three-quarters of women with RA who become pregnant will experience a temporary relief of their symptoms or 'remission' during pregnancy. The unlucky one-quarter who do not experience this may need some level of medication in order to function and try to prevent their disease from causing any damage to their body.

Unfortunately, the good odds of a period of remission during pregnancy can sometimes mean that women are given an expectation that they will experience this, and having to stay on medication is therefore not always adequately planned between the patient and their healthcare team.

The options for medication during pregnancy are limited, and because there can rightly be no study on pregnant women, they are often based initially on the way that the

drug works within the body, and then on small numbers of cases where women have become pregnant while on the drug.

The outcomes of recent study data have led to a label change for the biologic drug, Cimzia, which can now be considered as an option in pregnancy.

Decisions on the best options in terms of treatment during this time should be discussed between the patient and the rheumatology team, to decide what is best for the patient and their growing baby, based on the current evidence available.

While the safest option will always be for someone with RA to be off all medication during pregnancy, this has to be balanced in those still experiencing symptoms, in order for them to continue to work, function in daily life, and look after themselves in readiness for childbirth and parenthood.

Post-birth, women who had relief of symptoms during pregnancy will unfortunately often experience a major flare-up of their condition, which may require them to weigh up the benefits, and perhaps the desire to breastfeed against the need to get re-established on medication in order to control their RA and look after themselves and their baby.

DOWN TO THE DETAILS

SPR rounds up some of the recent findings circling the sector about the prospect of complicated outcomes in pregnancy related to rheumatology issues, and what other risks may line the road of the chronic inflammatory disease.

It's well-documented that during pregnancy many women with RA experience improvement in their symptoms – believed to be attributed to alterations in the body which suppress the immune system to stop the mother rejecting the foetus. However, the effect of RA in pregnant women on foetuses is, as previously mentioned, less known.

Adding building blocks to our foundation of learning are the results of a study recently presented at the Annual European Congress of Rheumatology (EULAR 2018) which indicates that pregnancies in women with RA are associated with premature delivery and low birth weight.

'Our results add to a growing body of evidence from different populations suggesting small, but significant, increases in prematurity and a decrease in birth weight in pregnancies in mothers with RA,' explained Dr Yun-Chen Tsai, Division of Rheumatology, Allergy and Immunology, Chang Gung Memorial Hospital, Taoyuan, Taiwan (study author).

'While these findings are important, they should not discourage women with RA from trying to conceive.'

To further gather insights, investigators also looked for potential risks to the mother, but, apart from pre-term labour, no associations were found. Investigated outcomes included birth-related death, cardiovascular complications, surgical complications, and other systemic organ dysfunction.

'Pregnancy in patients with RA is very complex as there are many factors clinicians and patients need to consider and limited data available,' added Professor Robert Landewé, Chairperson of the Scientific Programme Committee, EULAR.

'More information is needed to understand implications of the disease and treatments on both mother and foetus.'

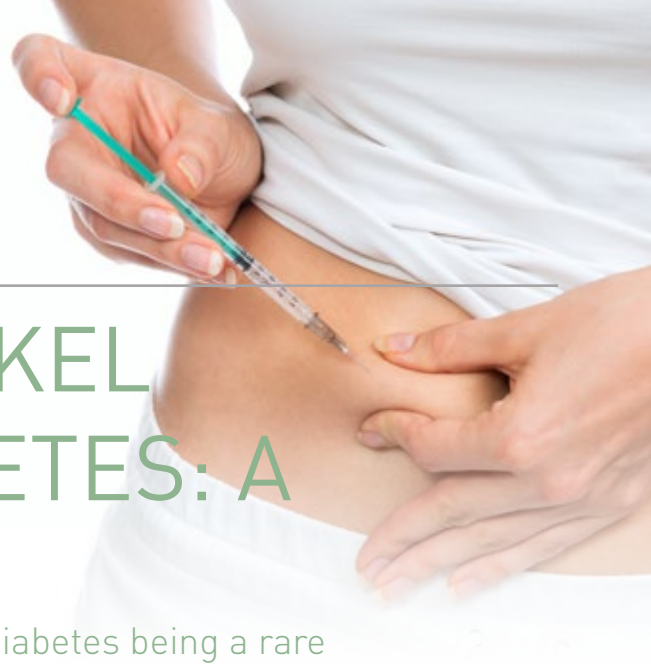
Late last year data also came to light regarding children born to women with RA, and their potential susceptibility for certain chronic diseases – which prompted increased awareness among paediatricians and general practitioners.

Published in Arthritis Care & Research, Line Jølving, MHS of Odense University Hospital, and her colleagues conducted a nationwide study with long-term follow-up of all children born in Denmark during a 25-year period – including 2,106 children born to women with RA, and 1,378,539 children born to women without RA.

The researchers found that the risk of being diagnosed with several diseases in childhood and adolescence heightened when the mother was diagnosed with RA before pregnancy. Specifically, the presence of RA during pregnancy was linked with a 2.2-times increased risk of thyroid disease, a 1.6-times increased risk of epilepsy, and a 2.9-times increased risk of RA in offspring.

'We have addressed a concern in pregnant women with RA in terms of a potential increased risk of a negative impact of their chronic disease on the future health of their offspring,' explained Jølving.

'Our results call for special attention on child development of RA, thyroid disease, and epilepsy if exposed to RA in utero.'



DIABETES

INSULIN AND NICKEL ALLERGY IN DIABETES: A CASE IN POINT

As a result of insulin allergy in patients with diabetes being a rare condition – coupled with the limited published literature on the matter – putting the appropriate management method into motion can cause much food for thought. Recapping her own first-hand experience, Anna Strzelecka, SAS Doctor in Diabetes and Endocrinology, Antrim Area Hospital, Northern Health & Social Care Trust, Northern Ireland presents her case report regarding an encounter with an insulin and nickel allergy in a patient with type 2 diabetes requiring insulin injections.

Anna Strzelecka

BACKGROUND

The number of people diagnosed with diabetes mellitus in Northern Ireland has increased by 62.5 per cent in the last decade, and there are now 92,480 people living with the condition. Almost nine-in-10 people diagnosed with diabetes have type 2 diabetes, and it's also estimated that there are 11,521 people in whom their diabetes has not been diagnosed. (1)

Insulin therapy should be considered in patients with type 2 diabetes if blood glucose levels are not adequately controlled with oral antidiabetic agents, or if oral antidiabetic drugs are contraindicated or not tolerated. (2)

Insulin allergy in patients with diabetes on insulin treatment is a rare condition. It usually causes immediate symptoms, such as urticaria and / or a rash, but in severe cases can cause angioedema, hypotension, and dyspnoea. (3)

Very few cases of insulin allergy are reported in published literature. In a patient with insulin allergy, immediate immunological hypersensitivity work-up is advised, and specific immunotherapy has been proven to be efficacious, and should be considered if other management strategies fail. (3, 4)

CASE REPORT

A 54-year-old patient was referred to the diabetic clinic with an 11-year history of poorly-controlled type 2 diabetes. She was first seen at the clinic in August 2018, and at that time the patient was taking metformin SR 2g daily, gliclazide 120mg daily, and dapagliflozin 10mg daily, as well as bendroflumethiazide 2.5 mg daily, lisinopril 20mg daily, and atorvastatin 40mg daily.

Dapagliflozin was changed to high dose canagliflozin 300mg daily, and sitagliptin 100mg daily was added as the patient's HbA1c was out of target at 79mmol/mol. Blood pressure was well-controlled at 134/84 and the patient's weight was 62.2kg, with a BMI of 28kg/m2. The patient was reviewed at the end of January 2017 and her HbA1c had deteriorated to 90mmol/mol and her weight had fallen to 60.8kg, however this was in the context of intentional weight loss.

After a long discussion about the deleterious effects of chronic hyperglycaemia, the patient agreed to be commenced on insulin. Gliclazide and sitagliptin were discontinued and biphasic insulin aspart was commenced. The patient was seen by the diabetic nurse specialist and was educated in regard to insulin injection technique, dose adjustment, management of hypoglycaemia, sick day rules, and travel. Appropriate educational literature was also provided.

At the start of March 2017, the Hba1c level was still suboptimal at 97mmol/mol. The patient admitted to having had a chest infection, and her blood glucose levels were 12 to 22mmol/mol, and therefore the insulin doses were increased.

After a long discussion with the patient, she reported frequent localised reactions at the injection sites. (Figures 1 and 2) She described the appearance of erythematous wheals appearing within

approximately 30 minutes of her injection, which usually settled by the following day. She didn't describe any rash elsewhere other than the injection sites. She denied any symptoms of angioedema or other features of anaphylaxis.

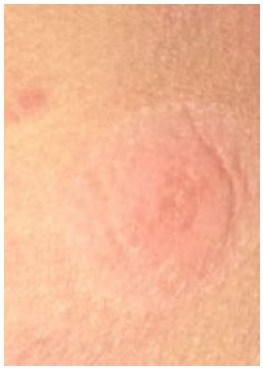


Figure 1

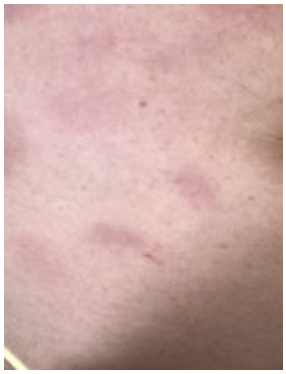


Figure 2

The patient felt that the needles were causing this reaction, and therefore 6mm needles were changed to 4mm ones.

Unfortunately, what seemed to be an allergic reaction didn't settle with either a change of needles or the addition of antihistamines.

Her insulin prescription was changed to a mixture of insulin lispro and insulin lispro protamine. A reaction continued to develop at injection sites, and the patient was referred to dermatology for skin patch testing.

The patient was reviewed again at the end of April 2017, and her Hba1c remained poor at 86mmol/mol. The patient was reluctant to increase her insulin doses and was omitting some injections due to the localised reaction at her injection sites.

The diagnosis of a nickel allergy was queried, and the availability of nickel-free needles was researched, however no stainless-steel needles were available. The HbA1c at the end of April was 86mmol/mol, and need for insulin treatment was confirmed.

The insulin injection port device was discovered, and two ports were tried to determine if the allergy could possibly be to the insulin itself. One port was injected with water for injections as a control, and the second port was injected with insulin.

After a few days the patient developed a local reaction at the insulin injection site, while the control (sterile water) side was reaction-free.

A mixture of insulin isophane human and insulin soluble human, biphasic isophane porcine insulin and biphasic isophane human insulin were tried with no improvement in the situation.

The patient was therefore commenced on insulin glargine, and no reaction developed with insulin glargine injected via the injection port. The patient's blood glucose levels improved to 12 to 18mmol/l, and her insulin doses were increased.

The patient was subsequently reviewed at the dermatology clinic, and a RAST test to various insulin components was performed and IgG antibodies to insulin were checked, with onward referral of the patient to the immunology clinic. A suggestion of avoiding insulins containing protamine was made.

The patient was also commenced on cetirizine, however she was unable to tolerate this due to the onset of abdominal pain. Her cetirizine prescription was changed to fexofenadine 100mg QID.

At the end of July the patient was reviewed, and her HbA1c had deteriorated to 115mmol/mol. As a result, faster formulation of insulin aspart was added at meal time to her basal insulin prescription. The HbA1c level improved slightly to 106mmol/mol by the end of September 2017.

The patient was reviewed at the immunology clinic in October 2017, and a nickel allergy was confirmed. Skin prick testing showed an appropriate positive control of 4mm and negative 2mm. Skin prick testing to insulin glargine showed a 2mm wheal, insulin glulisine 1mm, insulin lispro 3mm, insulin detemir 0mm, insulin aspart 0mm. The patient remains on faster formulation of insulin aspart and insulin glargine injected via insulin injection port with no local reaction, and was also able to wean her antihistamines.

Her doses of insulin were slowly increased in order to finally achieve better glycaemic control.

CONCLUSION

Type 2 diabetic patients with a nickel allergy requiring insulin injections can be successfully managed with the insulin injection port device. Those with insulin allergy should have urgent immunological work-up for hypersensitivities. Skin prick testing is required to investigate insulin allergy, and in some patients, specific immunotherapy may be required.

REFERENCES

1. News, Diabetes UK Northern Ireland, Number of people with diabetes in Northern Ireland increases by 62.5% in a decade. 16 June 2018
2. Insulin therapy in type 2 diabetes, www.cks.nice.org.uk
3. Insulin allergy: clinical manifestations and management strategies. Heinzerling L, at al. Allergy. 2008 Feb;63(2):148-55
4. Allergy to human insulin. Case reports in 3 patients. Nagel C, et al. Dtsch Med Wochenschr 1988; 113(25): 1013-1016

Timesulin®

When you live with Diabetes, timing is everything

The UK has one of the highest rates of Type 1 Diabetes in the world

A person with Type 1 Diabetes will have around 65,000 injections in their lifetime

Every minute £25,000 is spent by the NHS on Diabetes

The NHS spend around £14 Billion on all types of Diabetes

Peace of Mind
for all insulin pen users

Enhances Safety
Avoid forgotten injections and accidental double doses

Reduces Anxiety
Timesulin users will always know precisely how long since they took their last injection

It's Easy
No buttons to push, nothing to program and no change in routine. It's easy for all ages

Works with All Major Pens
Novo Nordisk®, Lilly®, Sanofi Aventis®

www.timesulin.com

SAVE THE DATE

With the 2018 Scottish Pharmacy Awards in sight – and as we get ready to celebrate the profession's progress – we want to hear about your own services to pharmacy.

At a time when it can feel like the weight of the world is winning, and darkness often dominates, SPR is proud to cast a light on the positivity which continues to prevail throughout the sector – via our annual Scottish Pharmacy Awards.

This year the black-tie celebrations are set to get underway at the Hilton Hotel, William Street, Glasgow on 7th November in which a range of industry representatives will be dining, networking, and paying tribute to their peers.

If you are a student steering towards greatness, an innovative newcomer, a long-time service provider – or you simply have a nominee in mind – why not get in touch?

Over the following pages, the 2018 Scottish Pharmacy Awards categories are finally unveiled, and the application process couldn't be easier. The entrants will be whittled down to a shortlist of finalists who will be invited along to the glamorous gala, and the winner will be presented with a unique crystal trophy to round off the festivities.

The awards up for grabs this year are:

Scottish Pharmacy Awards 2018

- Advances in Travel Health and Vaccine Services in Community Pharmacy
- Innovations in Clinical Development in Cardiology Pharmacy
- Education & Self Development in Community Pharmacy
- Hospital Pharmacy Team of the Year
- Innovations in Prescribing, Quality and Efficiency in Scotland
- Pharmacy Practice of the Year Independent
- Respiratory Project of the Year
- Student Leadership Award
- Community Pharmacist of the Year (Independent)
- Innovative Use of Technology in Community Pharmacy

ADVANCES IN TRAVEL HEALTH AND VACCINE SERVICES IN COMMUNITY PHARMACY

MEDCOM
SCOTHealthcare.com

Sponsored by
ScotHealthcare.com

Who Can Enter?

A pharmacy, which has focused on investing in staff and healthcare development is eligible to enter. For example, a pharmacy which has:

- Identified immunisation training and education needs, possibly following a request from a patient or customer
- Attended courses with professional bodies, such as NHS Education for Scotland, NPA etc
- Provided training and development to improve staffs' understanding of, and service to, the patient or customer
- Worked closely with local GP surgeries to provide the best possible service to their local community

(Please note that these points are suggestions only)

Judging Panel

The judging panel, made-up of respected members of the pharmacy industry, will select a maximum of five finalists, based on the written entries submitted. They may then liaise with the finalists before selecting a winner.

Liz McGovern
Specialist in Pharmaceutical Public Health, NHS GGC

Lorna Boyne
Nurse Consultant in Travel and International Health, Health Protection Scotland

Ysobel Gourlay
Lead Antimicrobial Pharmacist, NHS GGC

How to Enter

If you require an application form or would like any further information, please contact Bridget McCabe by emailing bridget.mccabe@nimedical.info, or calling 02890 999 441.

Entries MUST be accompanied by a digital photograph and testimonies from colleagues, local community groups, and allied healthcare sectors are welcome.

Deadline for Entry

The closing date for entries is Monday 10th September 2018.

The Awards Presentation

The selected finalists will be announced in Scottish Pharmacy Review and invited, with guest, to attend the awards ceremony, a black-tie event, at the Hilton Hotel, William Street, Glasgow on Wednesday 7th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

INNOVATIONS IN CLINICAL DEVELOPMENT IN CARDIOLOGY PHARMACY

Daiichi-Sankyo

Sponsored by Daiichi-Sankyo

Clinical pharmacists work as part of the general practice team to resolve day-to-day medicine issues and consult with and treat patients directly. This includes providing extra help to manage long-term conditions, advice for those on multiple medications, and better access to health checks. The role is pivotal to improving the quality of care and ensuring patient safety.

Who Can Enter?

This award category has been designed to encourage clinical GP pharmacists, who have developed innovative methods of patient care (in relation to cardiology patients), and can give evidence of having set-up the provision of one or more of the following in this medical field:

- Provision of critical input on medication use and dosing
- Working with patients to solve problems with their medications and improve adherence
- Consulting with secondary and / or primary care team members about medication-related issues
- Assisting with on-boarding of new patients by reviewing medications and aligning treatment options
- Reviewing and providing assistance with patients on multiple medications (polypharmacy) to help to simplify medication regimens
- Provision of alternative visit care, such as teaming with PCP in group visits, and addressing medication questions that are posed by patients via email or telephone inquiries

Judging Panel

The judging panel, made-up of respected members of pharmacy and GP practice, will select finalists based on the written entries submitted. They may then liaise with the finalists before selecting a winner if a decision has not been reached.

Iain Speirits
West Glasgow ACH Cardiology Pharmacist, NHSGG&C

Fiona Reid
Senior Clinical Pharmacist (Cardiology)

Pernille Sorensen
Clinical Lecturer, University of Strathclyde & Cardiology Pharmacist, Queen Elizabeth University Hospital

How to Enter

If you require an application form or would like any further information, please contact Bridget McCabe by emailing bridget.mccabe@nimedical.info, or calling 02890 999 441.

Entries MUST be accompanied by a digital photograph and testimonies from colleagues, local community groups, and allied healthcare sectors are welcome.

Deadline for Entry

The closing date for entries is Monday 10th September 2018.

The Awards Presentation

The three selected finalists will be announced in Scottish Pharmacy Review and invited, with guest, to attend the black-tie awards ceremony at the Hilton Hotel, William Street, Glasgow on Wednesday 7th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

EDUCATION & SELF DEVELOPMENT IN COMMUNITY PHARMACY

The Education & Self Development in Community Pharmacy Award is targeted at an independent or multiple pharmacy which has endeavoured to enhance their services to their local community by implementing change.

This category is focused on the pharmacy's investment in people through staff training and educational programmes which have improved the level and range of advice given to the patient by pharmacists and their staff. Patient care and safety is paramount in all pharmacy teams and education is the key to success in this area.

Who Can Enter?

A pharmacy, which has focused on investing in staff to embrace 'change', is eligible to enter.

For example, a pharmacy which has:

- Identified training and education needs, possibly following a request from a patient or customer, e.g. smoking cessation or diagnostic testing advice
- Given staff the opportunity to put their learning into practice, i.e. reviewing patients' inhaler techniques
- Attended courses with professional bodies, such as NHS Education for Scotland
- Provided training and development to improve staffs' understanding of, and service to, the patient or customer

(Please note that these points are suggestions only.)

Judging Panel

The judging panel, made-up of respected members of the pharmacy industry, will select three finalists, based on the written entries submitted. They may then liaise with the three finalists before selecting a winner.

Jenny MacDonald
Lead Pharmacist for Education & Training, NHS GG&C

Elaine Rankine
Head of Pharmacy, Education & Training, NHS GG&C

Deborah Stafford
Principal Pharmacist for Education for NHS Tayside

How to Enter

If you require an application form or would like any further information, please contact Bridget McCabe by emailing bridget.mccabe@nimedical.info, or calling 02890 999 441. Entries MUST be accompanied by a digital photograph and testimonies from colleagues, local community groups, and allied healthcare sectors are welcome.

Deadline for Entry

The closing date for entries is Monday 10th September 2018.

The Awards Presentation

The selected finalists will be announced in Scottish Pharmacy Review and invited, with guest, to attend the awards ceremony, a black-tie event, at the Hilton Hotel, William Street, Glasgow on Wednesday 7th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

HOSPITAL PHARMACY TEAM OF THE YEAR

MARTINDALE PHARMA
An Ethypharm Group Company

Sponsored by Martindale Pharma An Ethypharm Group Company

The Hospital Pharmacy Team of the Year Award has been developed to recognise hospital pharmacy teams from all backgrounds who are at the forefront of their profession, whether developing best practice models or implementing improvements in patient care. This is your opportunity to nominate peers and colleagues who have demonstrated outstanding dedication and commitment to the pharmacy profession or to submit your own team's work for consideration.

Who Can Enter?

Applications are invited from hospital pharmacy teams who can submit work / projects which demonstrate one or more of the following:

- Development of the accessibility of the service provided
- Establishment of high levels of safety in order to minimise risk
- A health improvement among selected patients
- Achievement of outcomes / initiatives leading to a positive impact for the public
- Where savings have been achieved, leading to increased cost-effectiveness by providing best value

The points above are suggestions only. Any pharmacy teams working in the hospital environment who demonstrates a unique commitment to clinical innovation and / or technical development is eligible for nomination / self-nomination for this award.

Judging Panel

Sandra Melville
Lead Pharmacist, Oncology & Acute Care, Lorn & Islands Hospital

Andrea Smith
Lead Pharmacist, Fife Health & Social Care Partnership

Evelyn McPhail
Director of Pharmacy, NHS Fife

How to Nominate

If you wish to nominate a hospital pharmacy team, or require an application form, please contact Bridget McCabe by calling 02890 999 441, or emailing bridget.mccabe@nimedical.info.

Deadline for Nomination

Once nominated, the candidates will be emailed an application form to complete. Early nomination affords the candidate a longer time to complete this form. The closing date for nomination is Monday 3rd September.

The closing date for completed application forms is Monday 10th September. Entries MUST be accompanied by a digital photograph, at least 500KB for printing quality. Judges welcome testimonies from relevant sources.

The Awards Presentation

The selected finalists will be announced in Scottish Pharmacy Review and invited, with guest, compliments of Martindale Pharma, to attend the black-tie awards ceremony at the Hilton Hotel, William Street, Glasgow, on Wednesday 7th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

INNOVATIONS IN PRESCRIBING, QUALITY AND EFFICIENCY IN SCOTLAND

Sponsored by Napp Pharmaceuticals Limited

'Napp Pharmaceuticals Limited is delighted to sponsor the Innovations in Prescribing, Quality and Efficiency Award in Scotland.

'The programme has been solely organised by Medical Communications Limited.'

Who Can Enter?

Nominations are invited for medicines management pharmacists / teams who have developed an innovative programme in primary care medicines' management.

Nominations are invited for projects which show evidence of:

- Innovations and / or a successful implementation programme for a new therapy or pathway in pharmaceutical care
- Examples of improvements in prescribing, quality, and efficiency
- How their projects or initiatives have improved inter-professional working

Once we have received all nominations, Scottish Pharmacy Review will contact those nominated to invite them to submit an application form for the judges to consider.

Judging Panel

The judging panel, made-up of respected members of the pharmacy industry, will select finalists, based on the written entries submitted. They may then liaise with the finalists before selecting a winner.

Fiona Thomson
Lead Pharmacist, Argyll & Bute HSCP, NHS Highland

Jill Nowell
Head of the Prescribing Support Unit, Pharmacy, NHS Tayside

Audrey Thompson
Lead Pharmacist Prescribing Services, NHSGGC

Gillian Cook
Advanced Primary care Pharmacist, Forth Valley

How to Enter

If you require an application / nomination form or would like any further information, please contact Bridget McCabe by emailing bridget.mccabe@nimedical.info, or calling 02890 999 441.

Deadline for Entry

Once nominated, the candidates will be emailed an information form to complete. Early nomination affords the candidate a longer time to complete information form. The closing date for nomination is Tuesday 28th August.

Entries MUST be accompanied by a digital photograph, at least 500KB for printing quality. Judges welcome testimonies from relevant sources.

The closing date for entries is Monday 10th September 2018.

The Awards Presentation

The selected finalists will be announced in Scottish Pharmacy Review and invited, with guest, to attend the black-tie awards ceremony at the Hilton Hotel, William Street, Glasgow, on Wednesday 9th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

PHARMACY PRACTICE OF THE YEAR INDEPENDENT

Scottish Pharmacy Review

Sponsored by Scottish Pharmacy Review

The Pharmacy Practice of the Year Independent Award is targeted at independent and independent multiple pharmacies who have demonstrated high standards of healthcare delivery. The pharmacy may display excellence in a particular professional aspect which ensures outstanding service to the consumer.

Who Can Enter?

Any pharmacy which has developed its practice or undertaken a project / initiative in the last 12 months, which has raised consumer pharmacy standards, is eligible to enter.

A pharmacy which has:

- Offered specialist services, for example, diabetes screening or cholesterol testing and / or introduced a private treatment room specifically for diagnostic services
- Supported self-care initiatives
- Liaised with GPs, nurses, hospitals, and nursing homes to provide additional services and support to patients / customers
- Increased the size of its dispensary, making it more open and organised with special fittings, such as innovative dispensary features
- Introduced out-of-hours access

(The above points are suggestions only)

Judging Panel

The judging panel, made-up of respected members of the pharmacy industry, will select finalists, based on the written entries submitted. They may then liaise with the finalists before selecting a winner if a decision has not been reached.

Dr John McAnaw
Head of Pharmacy, NHS 24 & Chair RPS Scotland

Gordon Winter
MD Pharmacist, Dalston Pharmacy

Sandra McNaughton
Associate Director for Contracted Community Pharmacy Services and Community Healthcare Partnership Development

How to Enter

If you require an application form or would like any further information, please contact Bridget McCabe by emailing bridget.mccabe@nimedical.info, or calling 02890 775 500. Entries MUST be accompanied by a digital photograph, at least 500KB for printing quality. Testimonies from colleagues, local community groups and allied healthcare sectors are welcome.

Deadline for Entry

The closing date for entries is Monday 10th September 2018.

The Awards Presentation

The three selected finalists will be announced in Scottish Pharmacy Review and invited, with guest, to attend the black-tie awards ceremony at the Hilton Hotel, Glasgow on Wednesday 7th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

RESPIRATORY PROJECT OF THE YEAR

Sponsored by Teva Respiratory

Whether they work in community pharmacies or GP surgeries, pharmacists are in a pivotal position to contribute to the overall management of respiratory diseases, such as asthma and COPD. Every year, pharmacists fill prescriptions for respiratory medications which remain the principal treatment for the diseases. Being qualified to advise patients on all aspects of their medication, and offer comprehensive reviews of patients' medicines, ensures that the patient is correctly using the medication prescribed. Pharmacists have many other opportunities to assist in the management of respiratory diseases and this award is in recognition of the excellent work carried out by pharmacists throughout Scotland.

Who Can Enter?

Are you working to improve the care of your asthma and COPD patients within your GP practice clinic or your community pharmacy, or with a partner organisation? Projects or working models are welcome where the applicants can give evidence of improved outcomes for their patients in helping them to live with, and improve, their wellbeing and management of their disease.

We would like submissions from pharmacists who are helping to improve the quality of life for those patients who are living with a respiratory disease.

This award aims to highlight the outstanding, innovative projects pharmacists have developed which have led to significant improvement in the care or clinical outcomes of patients with respiratory conditions.

Community and GP Practice pharmacists who can provide evidence of one or more of the following may apply: (These points are suggestions only)

- The opportunity for patients to have a review of the use of their respiratory medicines, relating to the effectiveness and safety of those medicines
- Having trained pharmacy staff to be more involved in patient care regarding patients with asthma or COPD
- The development of effective inter-professional teamwork and communication with other healthcare professionals
- Improvement in patients' understanding of their medication ,and thereby encouraging the patient to manage their condition more effectively

Judging Panel

The judging panel, made-up of respected members of the pharmacy industry, will select a minimum of three finalists, based on the written entries submitted. They may then liaise with the finalists before selecting a winner.

Graeme Bryson
Lead Clinical Pharmacist, Glasgow City HSCP – South Sector

Anne Milne
Deputy Lead Pharmacist, Prescribing Management, NHS Lanarkshire

Ann Auld
Lead Pharmacist, Prescribing Management, NHS Lanarkshire

How to Enter

If you require an application form or would like any further information, please contact Bridget McCabe by emailing bridget.mccabe@nimedical.info, or calling 02890 999 441. Entries MUST be accompanied by a digital photograph and testimonies from colleagues, local community groups, and allied healthcare sectors are welcome.

The closing date for entries is Monday 10th September 2018.

The Awards Presentation

The three finalists will be announced in Scottish Pharmacy Review and invited, with guest, to attend the black-tie awards ceremony at the Hilton Hotel, William Street Glasgow, on Wednesday 7th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

STUDENT LEADERSHIP AWARD

Sponsored by The Pharmacists' Defence Association

Strong leaders are driven by their vision of what their organisations could become. The role of a leader is to make people feel strong, informed, unified, and capable. Leaders need to have a combination of relentless effort, steadfastness, competence and attention-to-detail. Understanding the unique qualities of a team in order to deliver a great service is vital. Leaders must find their own voice and use their values to engage others in their common aspirations. Words and deeds need to be consistent; behaviour evokes respect. Do you respect the leadership qualities in one of your peers enough to nominate them for this accolade, or indeed do you feel you have the qualities within you to merit this award? A leader is not afraid to step forward

Judging Panel

The judging panel, made-up of respected members of the pharmacy academia and industry, will select a maximum of five finalists based on the entries submitted. They may then liaise with the finalists before selecting the overall winner.

Professor Donald Cairns
Head of School, Pharmacy and Life Sciences, Robert Gordon University

Professor Bill Scott OBE
Former Chief Pharmaceutical Officer for the Scottish government

Professor Robin Plevin
Head of Institute, Strathclyde Institute of Pharmacy and Biomedical Sciences

Alima Batchelor
Head of Policy, The Pharmacists' Defence Association

Deadline for Nomination

Nominations / self-nominations are invited from students and lecturers. The closing date for nominations is 2pm on Monday 3rd September. Nominees will then be emailed an application form to complete. Early nomination / self-nomination affords the candidate more time to complete information form.

Deadline for Completed Entries

The closing date for entries is 2pm on Monday 10th September 2018. Entries MUST be accompanied by a digital photograph, at least 500KB for printing quality. Testimonies from colleagues, local community groups, and allied healthcare sectors are welcome.

The Awards Presentation

A maximum of five selected finalists will be announced in Scottish Pharmacy Review and invited, with guest, compliments of The Pharmacists' Defence Association, to attend the black-tie awards ceremony at the Hilton Hotel, William Street, Glasgow on Wednesday 7th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

Sponsor Quote

'If the profession of pharmacy is to thrive then it will need strong leadership. Some leaders are born to lead, others are trained. Irrespective of their origins, all leaders have to be nurtured if they are to rise to the top and make a difference. The quest to inspire and encourage leadership in pharmacy must start at undergraduate level. These days all pharmacy students are hugely absorbed in their extensive, and often very challenging, studies. Despite that, some manage to involve themselves in additional activities that demonstrate that not only do they have a passion for their profession, but that they are becoming leaders in their own right. As pharmacists we all have a responsibility to encourage these passionate individuals as these will likely be the leaders of our profession in the future. The PDA is delighted to continue its sponsorship of this important award for 2018.'

Mark Koziol M.R.Pharm.S. Chairman,
The Pharmacists' Defence Association

COMMUNITY PHARMACIST OF THE YEAR (INDEPENDENT) Sponsored by Consilient Health

The title of 'Community Pharmacist of the Year (Independent) ' will be awarded to an independent pharmacist from the community setting who has made significant, influential, and sustained contributions to pharmacy practice in Scotland. This category is open to independent or independent multiple pharmacists only.Directors of Pharmacy, and their teams, are invited to nominate an independent community pharmacist, from their board, whom they feel is worthy of this prestigious title. Ideally, nominations are sought for pharmacists who have been involved in innovative collaborative work with the extended health care team. They will have made a continued effort to improve patient care and will have made a strong contribution to the compliance of safe and appropriate use of medications.

Who Can Enter?

They will be a leader and role-model for others within the pharmacy industry and will, through their various initiatives, have endeavoured to enhance the key role played by pharmacists in the healthcare arena.

Once we have received all nominations, Scottish Pharmacy Review will contact those nominated to invite them to submit an information form for the judges to consider.

Judging Panel

The judging panel, made-up of respected members of the pharmacy industry, will select three finalists based on the entries submitted. They may then liaise with the three finalists before selecting the overall winner.

David Thomson
Lead Pharmacist, Community Pharmacy Development & Governance, NHS Greater Glasgow & Clyde, and Treasurer, Royal Pharmaceutical Society

Frances Rooney
Directory of Pharmacy, NHS Tayside

Stephen McBurney
Primary Care and Community Pharmacy Co-ordinator, NHS Lothian , and Chair of the NHS Primary Care Community Pharmacy Leads Group

Deadline for Nominations

Once nominated, the candidates will be emailed an information form to complete. Early nomination affords the candidate a longer time to complete information form. Closing date for nomination is Tuesday 28th August.

Deadline for Entry

The closing date for nominees' completed entries is Monday 10th September 2018.

Entries MUST be accompanied by a digital photograph, at least 500KB for printing quality. Testimonies from colleagues, local community groups, and allied healthcare sectors are welcome.

The Awards Presentation

A maximum of five selected finalists will be announced in Scottish Pharmacy Review and invited, with guest, to attend the black-tie Awards ceremony at the Hilton Hotel, Glasgow on Wednesday 7th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

Sponsor Quote

'Consilient Health is once again pleased to be sponsoring an award. Independent pharmacy is finding the market in which they operate increasingly 'challenging.' We are pleased to present the award by way of recognition of the importance that ALL independent pharmacies have in their local communities.'

INNOVATIVE USE OF TECHNOLOGY IN COMMUNITY PHARMACY

cegedim rx
PHARMACY HEALTH SOLUTIONS

Sponsored by Cegedim Rx

Technology is at the heart of pharmacy and Cegedim Rx is delighted to sponsor a platform which acknowledges the excellent projects in this category. Nominations are invited from pharmacists / pharmacy teams, which have developed an innovative programme or project and can show evidence of one or more of the following:

- Improvement in quality of service through use of technology
- How their projects or initiatives have improved inter-professional working
- Innovations and/or a successful implementation programme for a new therapy or pathway in patient care
- Capacity increase, demand reduction, or cost savings through the introduction of innovative technology

Judging Panel

The judging panel, made-up of respected members of the pharmacy industry, will select three finalists, based on the written entries submitted. They may then liaise with the three finalists before selecting a winner.

Sam Reid
Managing Director, Buchanhaven Pharmacy

George Romanes
Managing Director, Romanes Pharmacy Group

Steve Bradley
Group Managing Director, Cegedim UK

How to Enter

If you require an application form or would like any further information, please contact Bridget McCabe by emailing bridget.mccabe@nimedical.info, or calling 02890 999 441.

Entries MUST be accompanied by a digital photograph and testimonies from colleagues, local community groups, and allied healthcare sectors are welcome.

Deadline for Entry

The closing date for entries is Monday 10th September 2018.

The Awards Presentation

The three finalists will be announced in Scottish Pharmacy Review and invited, with guest, to attend the black-tie awards ceremony at the Hilton Hotel, William Street, Glasgow, on Wednesday 7th November 2018. The winner will be announced at the awards ceremony and will receive a unique crystal trophy to mark the occasion.

Sponsor Quote

'We are thrilled to be sponsoring this year's 'Innovative Use of Technology in Community Pharmacy' award. Technology is one of the most adaptive elements of a pharmacy and an enabler for implementing change and delivering innovation, which is something Cegedim Rx is incredibly passionate about.

'We are looking forward to hearing from pharmacists and pharmacy teams about their innovative use of technology and the benefits it is delivering to community pharmacy and their patients.'

PARENTAL RESPONSIBILITY

OF RELATIVE CONCERN

The changing and complex nature of the family unit has resulted in a medico-legal dilemma for many medical professionals – who has access to a child's medical records, and who can give parental authority for a child's treatment? Kathryn Leask, Medico-Legal Adviser at the Medical Defence Union, examines the issues surrounding consent and parental responsibility.

Dr Kathryn Leask

The emergence of increasing questions about parental authority for a child's treatment is especially true for blended families in which parents may be estranged or have a difficult relationship. Consequently, it's important to have a good understanding of the law surrounding parental responsibility.

The Children Act of 1989 defines parental responsibility as, 'all the rights, duties, powers, responsibility and authority which by law a parent of a child has in relation to the child.'

The act outlines that such responsibilities extend to applying for access to their child's health records and / or giving consent to medical treatment if a child lacks capacity and it is in their best interests.

WHO HAS PARENTAL RESPONSIBILITY?

The Children Act 1989 states that a mother has automatic parental responsibility upon the birth of her child. Fathers who are married to the mother, or are named on the birth certificate, also have parental responsibility.

Unmarried fathers also have parental responsibility if they're named on the child's birth certificate. Devolution resulted in this legislation being introduced at different times across the nations – in England and Wales, 1st December 2003, in Scotland, 4th May 2006, and in Northern Ireland, 15th April 2002.

Same-sex couples will both gain parental responsibility if they were civil partners at the time of the treatment, e.g. donor insemination or fertility treatment.

Step-parents do not gain parental responsibility for a child when marrying or entering into a civil partnership with the child's parent. However, step-parents can apply for parental responsibility via a Parental Responsibility Order.

REQUEST FOR MEDICAL RECORDS

Members regularly contact the Medical Defence Union (MDU) for advice regarding requests for medical records, particularly when this involves blended families. In one case, an estranged father requested a copy of his daughter's clinical records. He had separated from her mother and had joint access to the child. He wanted details of the child's medical problems and treatment.

In circumstances such as these, professionals should obtain the consent of the child, if they are capable of making the decision for themselves. If this is not the case, the father's parental responsibility, or lack thereof, needs to be identified.

You may want to ask the father to provide evidence that he has parental responsibility, for example, providing a copy of the child's birth certificate. Even if the father has parental responsibility, it's important to still consider whether the disclosure is in the child's best interests.

In the case above, the father wanted to know about any medical problems his daughter has and it would seem reasonable for him to be aware of any medication the child is taking so that he can properly care for her and exercise his parental responsibility.

CONSENT FROM A RELATIVE

Another MDU case involved a grandmother who brought her grandchild into the practice to have a routine immunisation. As permission had not been given from the child's parents, the GP was unsure as to whether it would be suitable to proceed with the immunisation based on authority from the grandmother.

Treatments can only proceed if consent has been given by an individual with parental responsibility for the child.

While this would include the mother, and possibly the father as well, it would be unlikely to extend to wider relatives such as grandparents. The exception to this is if permissions have been granted by a court and when someone with parental authority has provided specific authority to the carer.

If a child requires urgent treatment, and an individual with parental responsibility can't be reached, the GP should act in the best interests of the child. Emergency treatment can be provided without consent in a child who lacks capacity where that treatment is given to save the life of, or prevent serious deterioration, in the health of the child.

CONSENT FROM ONE PARENT

There have been instances when one parent has given consent to a medical procedure being performed on a child. While only one individual, with parental responsibility, is required to give consent to a child receiving treatment, if a procedure is being undertaken for non-therapeutic reasons it's wise to seek consent from both parents. If parents can't agree on a course of treatment, it may be necessary to apply to a court in order for a best interest decision to be made.

NEW INITIATIVE TO TACKLE DOMESTIC ABUSE

A pioneering programme that has been proven to change the behaviour of domestic abuse perpetrators is being rolled out to six more local authorities, including Scotland's biggest city.

The Caledonian System is a specialist, court-mandated scheme to combat domestic abuse through the rehabilitation of male perpetrators, as well as striving to improve the lives of the women and children affected.

A total of £2.8 million in the latest round will double the programme's potential capacity to reach offenders.

Justice Secretary Humza Yousaf announced the funding on a visit to ASSIST in Glasgow; a specialist domestic abuse advocacy and support service focused on reducing risk and improving the safety of victims.

He said, 'Domestic abuse is a problem that continues to affect every community in Scotland. It is a priority for the Scottish government to tackle violence against women and expand pioneering initiatives, like the Caledonian System, which combines a robust programme for male offenders, aimed at changing their behaviour, with a focus on reducing the risk of harm to women and children.

'Funding to expand the availability of the Caledonian System is one of the measures we have put in place to protect victims and hold perpetrators to account, including strengthening the law and passing the Domestic Abuse Act earlier this year.

'Evidence shows that men who have completed this programme posed a lower risk to their families while women felt safer, so I am pleased this innovative approach will be more widely available for courts to consider.'

ROBERT GORDON UNIVERSITY APPOINTS NEW CLINICAL PROFESSOR IN NURSING

Professor Angela Kydd

Nursing research students and staff at Robert Gordon University (RGU) have welcomed the appointment of Professor Angela Kydd who has joined the university as Clinical Professor in Nursing – a joint role between the School of Nursing and Midwifery and NHS Grampian, which will see her support academics and clinical staff in their research endeavours.

Angela will also work closely with Kay Cooper from RGU's School of Health Sciences, recently named Clinical Professor in Allied Health Professions, as the two provide greater links for staff between RGU and NHS Grampian.

The role is jointly funded by both organisations, in another example of the university's commitment to partnering with industry and public sector organisations for the benefit of students, staff, and service users across the North East.

Speaking on her new position, Professor Kydd said, 'I am looking forward to working closely with my new colleagues at both RGU and NHS Grampian as part of this exciting opportunity.

'It's absolutely vital that educational establishments and healthcare providers work in partnership to ensure not only that students have a truly enriching learning experience, but that society can benefit from the results of such close collaborations.'

CURBS ON LEGAL HIGHS CUT NEED FOR HOSPITAL CARE

Fewer people sought hospital treatment for the toxic effects of so-called legal highs following temporary restrictions, a study based at an Edinburgh hospital has suggested.

The marked drop led to healthcare savings and suggests that the government restrictions – combined with local council measures – were successful in preventing drug harm.

The research is the first to evaluate the impact on hospitals of public health crackdowns on this type of drug, which has since been outlawed. To swiftly tackle a rise in the use of these novel psychoactive substances (NPS), the UK government brought in two temporary class drug-orders – or TCDOs – in 2015. These banned the import and supply of common types for 12 months.

NPS – synthetic chemical compounds that affect the brain and alter behaviour – were also targeted by trading standards curbs brought in by the City of Edinburgh Council in partnership with the police.

Researchers at the University of Edinburgh and NHS Lothian looked at anonymous health records documenting patients who came to hospital suffering harmful drug effects. The data spanned almost three years, covering the time before and after TCDOs and trading standards restrictions were brought into force.

In the six months following the introduction of TCDOs, researchers identified a large and rapid fall in people presenting to hospital for harms from NPS, and admissions relating to one particularly common drug type – ethylphenidate – almost completely disappeared in this time.

Lead researcher, Michael Eddleston, Professor of Clinical Toxicology at the British Heart Foundation Centre for Cardiovascular Science at the University of Edinburgh, and Consultant NHS Toxicologist, explained, 'Widespread adoption of trading standards enforcement, together with focused legislation, seemed to turn the tide against these highly-damaging drugs.

'These restrictions may have offered health benefits and saved the NHS substantial funds each year.'

FENO TESTING: A REALITY CHECK

Steering your first foray into FeNO testing requires careful consideration – from grasping the theory and training, to putting the treatment in to practice. Helping you charter this new territory, Carol Stonham, Vice Chair and Nurse Lead, Primary Care Respiratory Society UK, addresses the common questions surrounding FeNO monitoring in practice.

WHAT IS A FENO TEST?

Patients with allergic airway inflammation generally have higher than normal levels of nitric oxide (NO) in their exhaled breath. By measuring the concentration of NO in an exhaled breath (fractional exhaled nitric oxide or FeNO), clinicians can identify eosinophlic inflammation in the lungs.

WHY YOU NEED TO KNOW ABOUT FENO TESTING

NICE guidance for the diagnosis and monitoring of asthma (1), released in November 2017, recommended the addition of the use of FeNO tests to help diagnose asthma in adults, and in children when diagnosis is unclear.

The guidance suggested that asthma should no longer be diagnosed on clinical symptoms or spirometry alone, or by a trial of steroids. It recommended that in those aged five to 17 years, spirometry is used as a first line of investigation and that a FeNO test should be offered if a diagnosis of asthma is being considered, and in adults a FeNO test followed by spirometry with reversibility if obstruction is demonstrated should be routinely performed in all cases.

The guidance also suggested that clinicians should use FeNO testing to help manage asthma in patients who continue to have symptoms despite being prescribed inhaled corticosteroids.

THREE REASONS TO TAKE A FENO MEASUREMENT

1. TO ASSIST IN DIAGNOSIS

The FeNO test can help to diagnose eosinophilic airway inflammation and also determine when respiratory symptoms are not due to asthma.

The problem with spirometry is that if patients are asymptomatic on the day they come in for the test, which measures obstruction in the airways, the result will be normal. The likelihood is that they will still have some underlying inflammation, and this is where the FeNO test is useful because it measures inflammation.

Taking a good, accurate clinical history is always the basis of an accurate diagnosis when asthma is suspected. However, quite often the history is not straightforward – you think the patient has probably got asthma but it's not definite. In my experience it's those intermediate probability cases where a FeNO test is really useful.

I see it as being part of a jigsaw puzzle – it's not used on its own, but is used in addition to other diagnostic criteria.they feel well – and those are all given, but not valid reasons.

But high doses of medication are expensive and come with potential side-effects for patients, so we should consider stepping patients down when we can.

If you have a patient whose asthma is well-controlled: they have had at least three months when they have been really well, have not needed to use their rescue inhaler, have had no symptoms, and are functioning well, i.e. they're not reducing their activity and are not awake at night, then this could be a good time to step them down, taking into account any predictable seasonal triggers.

2. TO AID TREATMENT

The FeNO measurement can help the clinician to determine the likelihood of steroid responsiveness and can guide step-

wise changes in anti-inflammatory medication: step-down dosing, step-up dosing, or discontinuation of treatment.

If a patient on a low dose inhaled steroid becomes symptomatic, first review compliance and inhaler technique, then it can be useful to check a FeNO test to indicate whether they need more anti-inflammatory therapy.

Likewise, a FeNO measurement can help the clinician assess whether to step-down treatment. We don't step patients down as often as we should – we are notoriously bad at doing that. There are many reasons why we don't: we don't have the confidence to do it; we don't know when to do it; we are not really sure how to do it; patients don't want to do it because they feel well – and those are all given, but not valid reasons. But high doses of medication are expensive and come with potential side-effects for patients, so we should consider stepping patients down when we can.

If you have a patient whose asthma is well-controlled: they have had at least three months when they have been really well, have not needed to use their rescue inhaler, have had no symptoms, and are functioning well, i.e. they're not reducing their activity and are not awake at night, then this could be a good time to step them down, taking into account any predictable seasonal triggers.

The beauty of the FeNO test is that it can help to reassure them that stepping down treatment is safe. You can do a test and show the patient a measurement, then call them back a few weeks later and do another test to show them that the level of inflammation is not rising.

3. TO IMPROVE ADHERENCE TO TREATMENT

The FeNO test can establish a baseline level during a period of clinical stability, which can be subsequently monitored.

It can also help to determine whether patients are adhering to their prescribed corticosteroid treatment. If a patient's FeNO level is rising and they are on a reasonable dose of steroid, it's a good way of opening a conversation about inhaler technique, or to ask them about how they are taking their medication. If they are not taking medication as prescribed, they will usually be happy to chat about it, especially when the raised FeNO level is suggesting something is amiss.

Usually a four-second break in the conversation is enough space for a patient to feel the need to 'confess'.

So, if you have got a patient who isn't on-board with their care you can use the FeNO test measurements to demonstrate inflammation and show that treatment can make a difference over a short period of time. Their FeNO measurement can drop from 68 to 32 in a matter of a couple of weeks, the patient starts feeling better and that helps them to grasp the concept that their treatment works. Patients also like it because they have a figure that they can see is improving.

HOW DO YOU CARRY OUT A FENO TEST?

A FeNO device is a hand-held machine which requires a 10-second blow at 50mls per second. It works like an alcohol breathalyser, giving the results on the spot.

Technique varies marginally between manufacturers. One example: The patient first breathes out into the air to ensure any atmospheric NO is eliminated. They then seal their lips around the mouthpiece of the machine, take a full breath in, and blow back out again into the machine. This then gives a clean measurement of NO in the exhaled breath.

The patient is guided to breathe at the right flow rate by a computerised graphic. If the flow rate is not at the right level the machine will not give a measurement.

There is a shorter length test you can do for smaller children, but I usually use the 10-second test for most patients over six years old.

HOW MUCH TRAINING IS NEEDED TO USE A FENO DEVICE?

A short amount of training is needed which is provided by the manufacturer, either by coming in to the surgery, or via online webinars. The practitioner needs to be shown how to use the machine, and some education regarding interpretation of results. For example, respiratory infection can result in higher readings, and smoking may lower the results.

Importantly, using FeNO as part of routine respiratory care needs to be an add-on for an experienced practitioner with the appropriate level of education.

The Primary Care Respiratory Society UK has produced a guide to skill, education and training for healthcare professionals delivering respiratory care called Fit to Care. For more information, visit www.pcrs-uk.org/fit-care.

WHAT DOES IT COST?

FeNO testing is cost-effective because it aids correct diagnosis (both positive and negative), reduces unscheduled emergency GP appointments, A&E visits, and hospitalisation, by ensuring that clinicians put patients on the right medication first time, and improves compliance.

Stepping down to appropriate doses of inhaled steroids also saves money.

REFERENCES

1. NICE. Asthma: diagnosis, monitoring and chronic asthma management. 2017. Available at: www.nice.org.uk/guidance/ng80 (accessed 21.3.18)

ACKNOWLEDGEMENTS

Adapted and reproduced with permission from the Primary Care Respiratory Society UK. Visit www.pcrs-uk.org. First published in Primary Care Respiratory Update September 2016. Visit www.pcrs-uk.org/pcru.

Continued onto page 44

FENO TESTING

SPOTLIGHT ON SCOTLAND

There's no doubt that the visibility of FeNO testing has picked up tremendous pace – and that primary care is becoming increasingly aware of it as a valuable asset in the diagnosis of asthma in adults and children.

In fact, a recently released article compiled by The British Thoracic Society, 'Guidelines for the Diagnosis and Management of Asthma: A Look at the Key Differences Between BTS / SIGN and NICE', adds clinical weight to its recommendation, stating that, 'Both NICE and BTS / SIGN guidelines agree that Fractional Exhaled Nitric Oxide (FeNO) can be used as a surrogate marker of eosinophilic airway inflammation with variable sensitivity / specificity for predicting asthma. On this basis, NICE positions FeNO prominently in the algorithm in all adults and most children over five years with suspected asthma. In the absence of evidence to inform its position within diagnostic algorithms, BTS / SIGN lists FeNO as a potentially useful test, specifically highlighting its role in the investigation of people with an intermediate probability of asthma and without spirometric evidence of obstruction or reversibility.'

However, we still have a way to go in promoting the pathway's benefits in Scotland, and striking an understanding between financial investment and effective patient outcomes. Providing more clarity into the current barriers, two members of the profession share their FeNO testing experience – in terms of both accuracy and accessibility.

Lorraine Benson (Urquhart) is a Practice Nurse at Kingshill Medical Practice, Forth, Lanark.

Lorraine Benson (Urquhart)

'A 13-year-old boy attended the surgery with his mum as she was concerned that his asthma was not controlled properly. He was a very sporty young man, but was struggling to complete sporting activities due to increasing breathlessness. He was using his salbutamol inhaler much more than he should have been, and his compliance with beclometasone was not good as he often forgot his evening dose.

'I decided to carry out a FeNO test using the NIOX VERO device in order to measure the nitric oxide in the lungs. The result was way too high at 154 – his asthma was not well controlled at all.

'I decided against increasing beclometasone due to previous poor compliance and commenced fluticasone / vilanterol combination which is one inhalation daily, taken at approximately the same time every day, resulting in better compliance.

'The patient returned two weeks later for a review appointment; he had only had to use his salbutamol once in that two-week period. FeNO was once again carried out and the result was 18. Amazing!

'FeNO testing had allowed me to make a decision which was in the patient's best interest, as he was now able to carry out all sports with ease.'

Dr Andrew Smith is a Consultant in Respiratory Medicine at the Department of Respiratory Medicine, University Hospital Wishaw.

Dr Andrew Smith

'The use of FeNO in the diagnosis and management of asthma has become more common in routine clinical practice, especially following the updated BTS / SIGN guidelines, which now recommends its use as a test for eosinophilic inflammation to support a diagnosis of asthma.

'I use FeNO regularly in my asthma clinic and I find it particularly helpful in a number of areas, including identifying poor adherence with asthma therapy, and in limiting inappropriate escalation of steroid therapy. By providing an objective indicator for the level of activity of asthmatic / eosinophilic inflammation, it takes a lot of the guesswork out of relying on patient reported asthma symptoms, which are often non-specific, and can have poor concordance with actual inflammation levels. This allows for much more relevant and confident adjustment of anti-inflammatory therapy.

'Often, a normal FeNO result in a symptomatic asthmatic patient is the most useful result, as it suggests that the symptoms are not being driven by uncontrolled airway inflammation and therefore we can prevent unnecessary escalations in steroid treatment. Instead, in these situations, we then consider a non-asthmatic cause for these symptoms, such as nasal disease, gastro-oesophageal reflux, or dysfunctional breathing.

'There is great potential for FeNO in primary care in leading to much greater accurate and confident asthma diagnosis, and we should be looking at ways to provide primary care with greater access to FeNO testing, possibly through GP clusters having access to testing.

'We have also been piloting the use of FeNO in combination with spirometry through spirometry outreach service to primary care and are getting some good results.'

FeNO by NIOX®

Applying Science with a Single Breath

NIOX VERO® Gives You Knowledge in Numbers

Quick and Easy FeNO Measurement at the Point of Care

Using NIOX VERO with other monitoring tools can provide greater insight to guide **assessment and treatment of Th2-driven airway inammation.**[1-4]

It helps to identify **ICS-responsive patients**,[2,5] optimize **ICS dosing**,[3,4,6-8] monitor patient **adherence**[9,10] as well as to improve **cost efficiency**.[11-14]

FeNO measurement with NIOX® is reliable, and provides an **accurate result in a single measurement**.[15]

IMPORTANT INFORMATION REGARDING NIOX VERO®

NIOX VERO is a portable system for the non-invasive quantitative simple and safe measurement of Nitric Oxide (NO) in human breath. Nitric Oxide is frequently increased in some inflammatory processes such as asthma and decreases in response to anti-inflammatory treatment. FeNO measurements should be used as part of a regular assessment and monitoring of patients with these conditions. NIOX VERO is suitable for patients age 4 and above. As measurement requires patient cooperation, some children below the age of 7 may require additional coaching and encouragement. NIOX VERO can be operated with 2 different exhalation times, 10 seconds and 6 seconds. The 10 second mode is the preferred mode. For children who are not able to perform the 10 second test, the 6 second is an alternative. The 6 second test should be used in caution with patients over the age of 10. It should not be used in adult patients. Incorrect use of the 6 second exhalation may result in falsely low FeNO values, which can lead to incorrect clinical decisions.

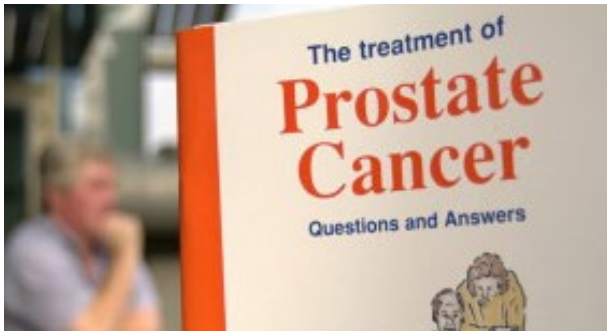
1. Alving K et al. Basic aspects of exhaled nitric oxide. Eur Respir Mon. 2010;49:1-31. **2.** Dweik RA et al; on behalf of the American Thoracic Society Committee on Interpretation of Exhaled Nitric Oxide Levels (FeNO) for Clinical Applications. An ofcial ATS clinical practice guideline: interpretation of exhaled nitric oxide levels (FeNO) for clinical applications. Am J Respir Crit Care Med. 2011;184(5):602-615. **3.** Smith AD et al. Use of exhaled nitric oxide measurements to guide treatment in chronic asthma. N Engl J Med. 2005;352(21):2163-2173. **4.** Powell H et al. Management of asthma in pregnancy guided by measurement of fraction of exhaled nitric oxide: a double-blind, randomised controlled trial. Lancet. 2011;378(9795):983-990. **5.** Smith AD et al. Exhaled nitric oxide: a predictor of steroid response. Am J Respir Crit Care Med. 2005;172(4):453-459. **6.** Syk J et al. Anti-inammatory treatment of atopic asthma guided by exhaled nitric oxide: a randomized, controlled trial. J Allergy Clin Immunol Pract. 2013;1(6):639-648. **7.** Szeer SJ et al. Management of asthma based on exhaled nitric oxide in addition to guideline-based treatment for inner-city adolescents and young adults: a randomised controlled trial. Lancet. 2008;372(9643):1065-1072. **8.** Petsky HL et al. Management based on exhaled nitric oxide levels adjusted for atopy reduces asthma exacerbations in children: a dual centre randomized controlled trial. Pediatr Pulmonol. 2015;50(6):535-543. **9.** Beck-Ripp J et al. Changes of exhaled nitric oxide during steroid treatment of childhood asthma. Eur Respir J. 2002;19(6):1015-1019. **10.** Delgado-Corcoran C et al. Exhaled nitric oxide reects asthma severity and asthma control. Pediatr Crit Care Med. 2004;5(1):48-52. **11.** LaForce C et al. Impact of exhaled nitric oxide measurements on treatment decisions in an asthma specialty clinic. Ann Allergy Asthma Immunol. 2014;113(6):619-623. **12.** Lester D et al. An investigation of asthma care best practices in a community health center. J Health Care Poor Underserved. 2012;23(suppl 3):255-264. **13.** Honkoop PJ et al; Asthma Control Cost-Utility Randomized Trial Evaluation (ACCURATE) Study Group. Symptom- and fraction of exhaled nitric oxide-driven strategies for asthma control: a cluster-randomized trial in primary care. J Allergy Clin Immunol. 2015;135(3):682-688. **14.** National Institute for Health and Care Excellence. Measuring fractional exhaled nitric oxide concentration in asthma: NIOX MINO, NIOX VERO and NObreath. http://www.nice.org.uk/guidance/dg 12. Zugriff am 31. März 2016. **15.** Kapande KM et al. Comparative repeatability of two handheld fractional exhaled nitric oxide monitors. Pediatr Pulmonol. 2012;47(6):546-550.

CIRCASSIA

A LEARNING CURVE

Spanning advances in both the treatment of cancer and a fatal third-world disease, and the development of a healthy biscuit that can build muscle mass, Scotland's universities continue to spearhead exciting healthcare studies. SPR's Katie Moore takes a look at the new research currently being conducted, and how it is sparking inspiration across the sector.

CONFRONTING THE SILENT KILLER



A £10.5 million project at the University of Aberdeen will answer critical questions about the under-researched disease, prostate cancer.

PROSTATE CANCER: THE FACTS

- A tabooed topic, this type of cancer is often ignored by men due to the potential embarrassment of visiting their GP to get checked for symptoms of the disease
- More men die of prostate cancer every year than women die of breast cancer. Currently prostate cancer stands in third place behind lung and bowel cancer as the biggest cancer killer in the UK
- Prostate cancer is the most common cancer in European men and represents one-in-10 of all male cancer deaths
- Healthcare costs related to prostate cancer are estimated to account for seven per cent of all cancer costs in Europe
- The mortality rate for prostate cancer had only fallen by six per cent in 2015. This is considerably less than the 10 per cent fall in the mortality rate for breast cancer in that same year

The project at the University of Aberdeen, funded by PIONEER European Commission IMI, will be led by Professor James N'Dow and will incorporate 32 institutions and companies from nine countries. Professor N'Dow has outlined that the aim of the project is to fill in the gaps in the knowledge of the management and treatment of prostate cancer.

Key areas that will be meticulously investigated throughout the project include:

- The lack of standardisation of prostate cancer definitions across all stages of the disease
- The insufficient knowledge of the risk factors for developing prostate cancer
- The insufficient knowledge of patient characteristics, including genetic profiles

Through collating and harmonising massive amounts of data gathered from prostate cancer patients and researchers, Professor N'Dow hopes that the project will transform the field of prostate cancer care. Ultimately, Professor N'Dow intends for the PIONEER project to bring about the improvement of 'prostate cancer-related outcomes, healthcare efficiency, and the quality of health and social care delivered to all prostate cancer patients and their families.'

CANCER RESEARCH BOOST FOR UNIVERSITY OF ABERDEEN

Dr Raif Yuecel (left), Head of the Iain Fraser Cytometry Centre, with George McIntyre and Margaret Stenton, Trustees of the Gordon and Ena Baxter Foundation

The Gordon and Ena Baxter Foundation has funded the purchase of the new £85,000 Attune Acoustic Focusing Cytometer – technology that can find cancer quicker by screening up to 30,000 cells per second. Now, detecting cancer cells within the three million – 5.5 million cells in every millilitre of blood can be carried out with much greater speed and efficiency than ever before.

Dr Raif Yuecel, Head of the University of Aberdeen's Iain Fraser Cytometry Centre, explained that, 'The generous support from the Gordon and Ena Baxter Foundation in providing this

cutting-edge technology has enabled Iain Fraser Cytometry Centre at IMS to be at the forefront of cancer research.'

Kay Jackson, the Foundation Manager, expressed delight at the fact that the Baxter Foundation was able to help researchers at Aberdeen with their ground-breaking work and their fight against a disease that will directly affect one-in-three of us.

'This incredible machine,' according to Kay, will enable a 'deeper understanding of cancer cells so new and more effective treatments for cancer can be developed.'

NEW DRUG DEVELOPED TO TREAT MAJOR THIRD-WORLD DISEASE

The Drug Discovery Unit at the University of Dundee has developed a pre-clinical drug that has the potential to treat visceral leishmaniasis.

WHAT ARE THE VISCERAL LEISHMANIASIS FACTS?

1. It is caused by a parasite which is spread through the bite of infected sandflies
2. People infected with the disease suffer from fever, weight loss, and anaemia
3. The disease is typically fatal if left untreated – it kills 95 per cent of people affected
4. It hits the world's poorest communities the hardest and causes 20,000-to-40,000 deaths annually
5. Visceral leishmaniasis is one of the world's most neglected and under-researched tropical diseases

At present, the drugs available to treat this disease have limitations and are not ideal for use. Subsequently, the compound GSK3186899/DDD853651 that has been developed through a collaboration between the Drug Discovery Unit at Dundee, GSK Global Health Research, and Wellcome could be the means through which lives could be saved and protected from this devastating disease.

The compound developed principally works through inhibiting the enzyme called CRK12. Essentially, the new compound offers the option of a safer oral drug that could potentially tackle a disease that kills tens of thousands of people every year.

Head of Quantitative Pharmacology at the Drug Discovery Unit, Professor Kevin Read, stated that although 'the compound still has some way to go before it can be used to treat patients, we are excited by the great progress that we have made.'

FAECAL BLEEDING – NOT JUST A SIGN OF CANCER?

The presence of blood in stools has long been associated with colorectal cancer. However, a new study at the University of Dundee's School of Medicine has shown that patients who recorded a positive faecal occult blood test (FOBT) were much more likely to die, not only from colorectal cancer, but also from a range of other diseases.

The study at Dundee, led by Professor Bob Steele, examined data from 134,000 patients who participated in FOBT screening in Scotland since 2000 and linked their test results with mortality data from the National Records of Scotland over the same period. Results from this study indicated that faecal bleeding can be significantly associated with an increased risk of dying from circulatory disease, respiratory disease, digestive diseases, neuropsychological disease, and non-colorectal cancer.

Professor Steele noted that the research carried out at Dundee was 'the first observational study to demonstrate a link between faecal bleeding and increased risk of death from a range of diseases other than colorectal cancer.'

LINK BETWEEN AIR POLLUTION AND BREATHING PROBLEMS CONFIRMED

A research project at the School of Medicine in the University of Dundee has clearly linked air pollution to the spike in breathing problem-related admissions to hospitals and visits to GPs.

Researchers at Dundee studied nearly 15 years of data for air pollution levels in Dundee, Perth, and the surrounding area, and matched it to medical records of 450 patients who suffer from bronchiectasis – a long-term chronic condition which can cause a persistent cough, breathlessness, and frequent chest infections.

The research project's findings revealed that:

1. On days when air pollution spiked, there was an increase in admissions to hospitals and visits to the GP concerning breathing problems
2. The impact of air pollution is worse in the summer. Hot and less windy days raise the levels of air pollution. Moreover, as people are outside more during the summer they are exposed to the pollution, thus raising the number of people with breathing problems attending the hospital or the GP

British Lung Foundation Professor of Respiratory Research at Dundee, James Chalmers, emphasised the necessity of improving air quality, not only for health reasons, but because it makes economic sense for the NHS. Professor Chalmers explained that the increasing number of patients with lung conditions is placing additional costs on the NHS when it is already under increasing strain.

'We should be looking at effective ways of preventing illness rather than simply treating it,' he claims.

TAKING THE BISCUIT... AND EATING IT TOO!

Are you a biscuit lover? Do you cravingly think about your mid-afternoon biscuit snack? Do you enjoy letting your taste buds experience new flavour sensations? Then the University of Aberdeen wants you!

Scientists and nutritionists at the University of Aberdeen Rowett Institute have created, as part of a partnership grant with Protein 4 Life, biscuits with higher amounts of protein to prevent sarcopenia (loss of muscle mass). The higher protein biscuits have been produced with the intention of promoting healthy ageing by supporting protein intake.

However, leader of the study, Professor Alexandra Johnstone, has said that, 'there is absolutely no point in us developing snacks that are healthier but that the majority of people would not find palatable.'

Subsequently, the Rowett Institute at Aberdeen University is calling out for volunteers to sample five different biscuits created by scientists and give them a rating.

BACK TO SCHOOL SPECIAL

ALL KIDDING ASIDE

Widely coined 'a clinical chameleon', it's no great surprise that young ones may grapple with their coeliac disease diagnosis. Sharpen your techniques when advising these patients and handling their chagrin – all the while seeing how society, and specifically, big pharma, can better serve the condition – via SPR's interview with the European Society for Paediatric Gastroenterology, Hepatology and Nutrition, and Dr Peter Gillett, a Consultant Paediatric Gastroenterologist at the Royal Hospital for Sick Children, Edinburgh.

ESPGHAN

HOW PREVALENT IS COELIAC DISEASE AMONG CHILDREN?

The European Society for Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN): Coeliac disease is the most common food-related chronic disease among children in Europe. Paediatric coeliac disease is common; affecting one-in-100 children in the majority of European countries, and in some countries, as many as three-in 100. With rising prevalence, undiagnosed coeliac disease leaves a large population at risk of developmental issues and long-term associated health complications.

In the past, coeliac disease was considered a rare disease among young children. Now we know that it is a common disease among children of all ages, including adolescents.

One possible explanation is the overall increase in autoimmune diseases in general – for example, cases of type 1 diabetes are also rising. That could be related to the fact that we are living much cleaner lifestyles as a whole, which is resulting in fewer infections.

That, in turn, is forcing the immune system to look elsewhere for work and so encouraging the development of autoimmune diseases.

TO WHAT DEGREE DOES THE MANNER IN WHICH SYMPTOMS ARE EXHIBITED CHANGE AS THE PATIENT GETS OLDER?

ESPGHAN: A significant challenge in recognising coeliac disease is the variation in the presentation and intensity of symptoms. In many cases, coeliac disease may even occur without any symptoms.

Dr Peter Gillett: One important coeliacologist called Allessio Fasano (now in Boston) called the condition 'a clinical chameleon' which I think really sums the issue up!

WHAT'S THE EARLIEST AGE IN WHICH COELIAC DISEASE CAN BE DIAGNOSED? AS A POPULATION AS A WHOLE, DO WE HAVE A PROBLEM WITH DELAYED DETECTION?

Dr Peter Gillett: Chronic diarrhoea after weaning usually won't show itself until at least 10 months of age, and of course many kids this age will have loose stools, and may have other issues like cow's milk protein allergy etc.

ESPGHAN: Despite being easy to detect and treat, diagnostic delays can often reach eight years.

CAN YOU OVERVIEW THE IMPORTANCE OF THE PHARMACIST'S INTERVENTION IN COELIAC DISEASE?

Dr Peter Gillett: As part of the issuing of prescriptions for gluten-free products, signpost them to the Coeliac UK website as a good source of information. Are they members? If not, and they are struggling, advise them to contact the local paediatric dietitian, or the paediatrician who may be following them, or the GP if not under follow-up (unusual in kids).

CAN YOU SUGGEST ANY TACTICS FOR THEM IN DEFUSING FEAR AND ANXIETY, NOT ONLY IN THE CHILD, BUT AMONG PARENTS TOO?

ESPGHAN: In terms of health, advise them that their child will have a good future on a gluten-free diet. Managing a gluten-free diet can be difficult and isolating, with children worrying about what their friends will think.

Join your national coeliac society for lots of help and to meet other children in the same position.

HOW BROAD A CHOICE OF GLUTEN-FREE FOODS ON PRESCRIPTION ARE AVAILABLE?

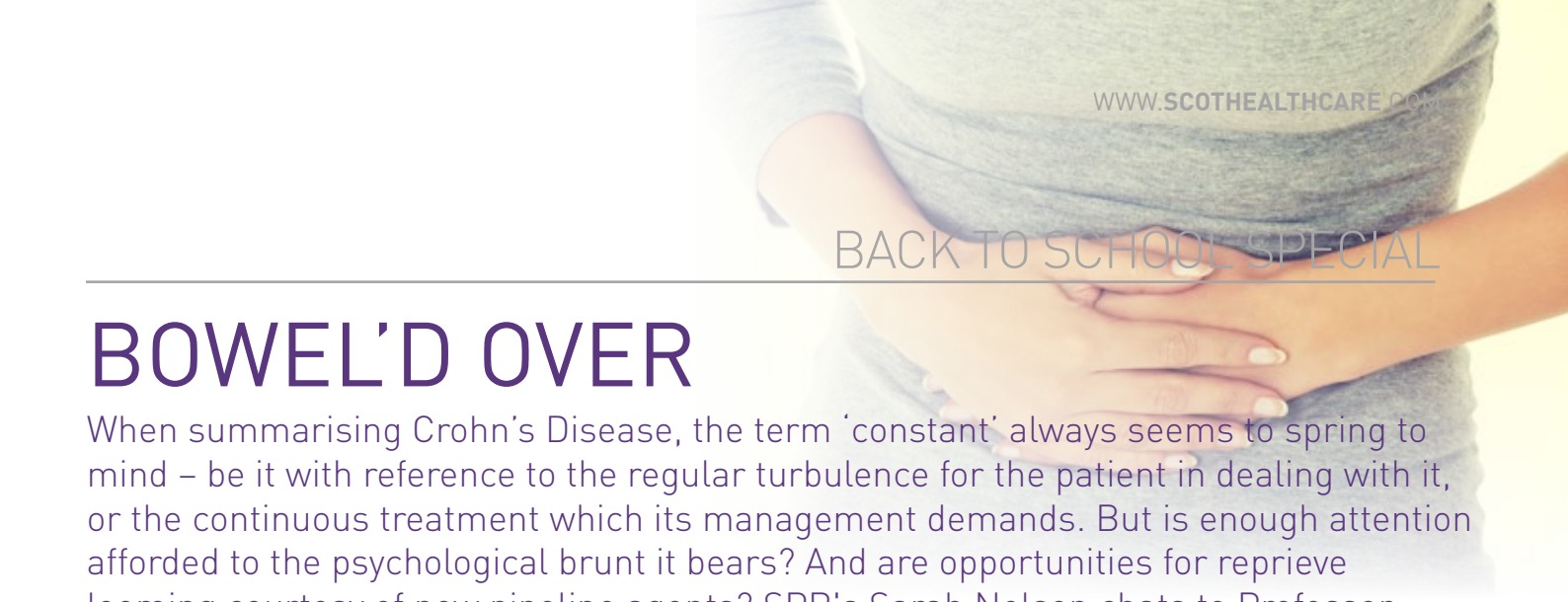
ESPGHAN: Gluten-free replacement foods, such as bread and flours, are at least three-to-four times more expensive. The price is affected by production methods, gluten testing, and ingredients. It is possible to avoid these by using alternative foods like potatoes and rice and cooking from scratch – but we know that isn't easy for everyone.

ARE THERE ANY BARRIERS CURRENTLY OBSTRUCTING THE SECTOR'S ABILITY TO SUFFICIENTLY SERVE THE INCIDENCE OF COELIAC DISEASE?

ESPGHAN: Coeliac disease is up against a number of other conditions like cancer and multiple sclerosis which tend to grab the headlines more because they often have very poor outcomes for children. Some children with coeliac disease suffer very badly before they get diagnosed, but even so it is seen as a condition that's controlled by diet and doesn't involve any medication, which diminishes its seriousness in many people's eyes. As a result, it hasn't achieved the same level of attention from the public or among the medical community.

In terms of coeliac disease-specific research, there isn't enough going on by a long shot. In the UK, we've very recently launched a new appeal to try and pull together a £5 million (approximately €6 million) research fund to drive forward research because, again, coeliac disease isn't drug-treatable so doesn't receive a lot of attention in big pharma.

What we've had to do is make the case that, actually, this is an important area and it is worth the investment. What we know about how the immune programme works in coeliac disease could be used as a model for many other autoimmune diseases, which is a strong case for extra investment – and hopefully that's coming.



BOWEL'D OVER

When summarising Crohn's Disease, the term 'constant' always seems to spring to mind – be it with reference to the regular turbulence for the patient in dealing with it, or the continuous treatment which its management demands. But is enough attention afforded to the psychological brunt it bears? And are opportunities for reprieve looming courtesy of new pipeline agents? SPR's Sarah Nelson chats to Professor Philippe van Hootegem, member of the United European Gastroenterology Public Affairs Committee, about the quest for improved Crohn's Disease care.

Is there anything we can attribute to the rise in young people with Crohn's Disease?

The diagnosis of Inflammatory Bowel Disease (IBD) is often made between the ages of 15 to 25, but many younger children develop the disease before this age. Problems with young patients are often complex because, in addition to the disease factors, the requirements for their growth and development need to be taken into account. Often, there is already a growth issue before the intestinal symptoms begin.

The goal of IBD treatment in children is to normalise growth and puberty development, in addition to the control of the intestinal inflammation. Nutritional therapy therefore plays a very important role in their development.

Professor Gigi Veereman, Secretary General for the European Society of Paediatric Gastroenterology, Hepatology and Nutrition, added: IBD in children is associated with high levels of stress. Encouraging a healthy lifestyle is advised for paediatric patients, such as partaking in regular physical exercise, getting enough sleep, and eating healthily. Besides medication, great attention should be given to nutrition and nutritional supplements.

How encompassing is the impact of Crohn's Disease on the patient's everyday life?

The course of the disease can be extremely variable. Some patients experience little or no symptoms and do not need medication to control the disease. Others have to deal with recurring symptoms and do not need medication for disease control. It is not easy to predict the course of the disease, although risk factors, such as a young age at diagnosis, the early need of corticosteroid therapy, and smoking, can predict less favourable outcomes.

How major can the complications related to Crohn's Disease be?

IBD does not in itself cause reduced fertility in men or women. However, active IBD during pregnancy increases the risk of miscarriage, pre-term birth, or low birth weight. It is therefore important to have as inactive a disease as possible before becoming pregnant, and for patients to discuss their pregnancy wishes with their doctor in good time.

Patients with IBD may have an increased risk of bowel cancer. This depends on the severity, localisation, and duration of the inflammation.

Crohn's or ulcerative colitis patients with long-standing and pronounced inflammation of the colon have a significantly higher risk of cancer than patients with damage to the small intestine. In order to reduce the risk, it is recommended to regularly perform an intestinal examination in patients with an increased risk, with intervals of every one, three, or five years.

Do you think enough light is shed on the invisible symptoms, like the psychological distress caused?

Traditionally, the main treatment goal for IBD remains to achieve and maintain remission, and ultimately to ensure optimal quality of life. Many patients report psychological and emotional distress, so more support is required from multidisciplinary teams to help reduce this burden.

What are the recommended treatment approaches? How common is surgery?

As the exact cause of the disease is not fully understood, there is currently no definitive cure of the disease. Once the diagnosis is made, a balanced diet and maintaining a healthy body weight are important, and smoking cessation is vital for Crohn's patients.

The classical treatment with corticosteroids is efficient, but has side-effects when used long-term. Many new drugs have been developed in the last two decades, such as infliximab, adalimumab, vedolizumab, and ustekinumab that can help to obtain a steroid-free remission and also achieve disappearance of inflammatory injuries in the gut.

Fortunately, new promising medications are being developed at a high rate and we are hopeful that these will be able to cover some unmet needs for patients.

In what circumstances is combination therapy suggested?

Approximately two-thirds of Crohn's patients must undergo a surgical resection in which the affect part of the intestine is removed. For ulcerative colitis, the removal of the colon can cure the disease. Sometimes a definitive stoma appears to be necessary, but surgical techniques where an artificial reservoir is constructed, that allows better control of bowel movements, can be helpful to avoid this.

What are the current and emerging issues surrounding Crohn's Disease? Are there any agents in the pipeline?

The current issues are that there are many medications available, yet still unmet needs, and patients that are refractory to any treatment

Many new agents are in the pipeline, and some are almost ready to become available, e.g. etrolizumab, risankizumab, as well as oral medications, such as JAK inhibitors (filgotinib etc.).

Due to the increasing complexity of Crohn's Disease, how has the role of the pharmacist evolved?

Pharmacists can contribute also to patient education and information, but always in concertation with the gastroenterologist; they can particularly help to increase therapy adherence and correct use of medications.

BACK TO SCHOOL SPECIAL

OUT OF THEIR COMFORT ZONE

Plaque psoriasis is a common condition – it's estimated that around two per cent of the UK population (1) (up to two million people) are at the receiving end of its wrath, meaning that there are likely to be a number of patients affected by plaque psoriasis in even the smallest of pharmacy communities. The Psoriasis Association is at hand to help pharmacists and patients alike to face up to flare-ups, and navigate the multifaceted management involved.

Plaque psoriasis, its appearance, and response to triggers and treatments, is unique to each individual, making it a condition that is often difficult to manage. As with many long-term conditions, the effects of plaque psoriasis often go far beyond those we can see on the surface of the skin, and for many patients, include significant impairment of quality of life, psychosocial wellbeing issues, difficulties with mobility and work, and impacts on the wider family.

Anecdotally, we often hear from patients who, having been correctly told that there is no cure for plaque psoriasis, presume that this means that nothing can be done for them. The key message that the Psoriasis Association is keen to promote is that plaque psoriasis is a treatable and manageable condition.

BELOW THE SURFACE

Although most plaque psoriasis patients have mild-to-moderate disease, and can be appropriately managed in a primary care setting, using topical treatments, even objectively 'mild' cases can be complex, difficult to treat, and have a profound impact on quality of life. Additionally, recent research has found links with comorbidities, including metabolic syndrome – meaning that lifestyle factors, including weight, exercise, and smoking status, are now also intrinsic to this condition. Due to this multifaceted nature, a holistic approach to treating the patient is often most effective.

Topical therapies are still a mainstay of plaque psoriasis treatment, and even those patients who are receiving UV, systemic, or biologic therapy in secondary care will likely use some kind of maintenance topical, as well as emollient. However, patients whose plaque psoriasis is more moderate-to-severe in nature; has been resistant to topical treatment alone; or exists in high impact sites, such as on the face, hands, and genitals, warrant referral to specialist, secondary care.

NICE guidance CG153 sets out the pathway which should be followed through systemic and biologic treatments, and recent years have seen more available options in both of these categories than ever before. These are theoretically accessed in a linear 'pathway', however, plaque psoriasis itself is anything but linear and ordered. It doesn't necessarily get progressively worse or better, and can flare up at unpredictably short notice.

Waiting times for dermatology referrals – as well as difficulties in obtaining those referrals – mean that many patients struggle to access effective treatment in a timely fashion. This is another time when pharmacists may be able to offer timely information, advice, and support.

A SHOW OF SUPPORT

One method of providing this information and support is to signpost to a reliable patient organisation, such as the Psoriasis Association. Set up in 1968, and celebrating its 50th anniversary this year, the Psoriasis Association is a longstanding source of patient information on plaque psoriasis and its treatments, which is up-to-date, evidence-based, and unbiased. The Psoriasis Association's information production procedure is accredited by the NHS Information Standard, so you can feel confident that you are providing reliable information to patients. Many leaflets and information sheets can be downloaded from the Psoriasis Association website, accessed via its various helplines, or hard copies can be ordered to be kept in-pharmacy. The Psoriasis Association also offers a website and forum dedicated to young people with the condition.

Many people with plaque psoriasis feel isolated, partly due to not knowing anyone else with the condition. The opportunity to talk to others and share advice and experiences is often valuable, and can provide the emotional support that healthcare professionals are unable to deliver. If you have a number of patients with plaque psoriasis within the pharmacy, it may be worth exploring the possibility of setting up an informal support group with interested individuals. Alternatively, the Psoriasis Association provides online forums on their website, and also has an active and supportive private Facebook group.

THE VALUE OF PHARMACY

Plaque psoriasis is a complex and multifaceted condition, which requires a multidisciplinary approach in order to be successfully managed and provide good outcomes for the patient.

Pharmacists are well-placed to support patients with many aspects of coping with plaque psoriasis, including discussions around adherence to treatment, management of lifestyle factors, and methods of applying topical treatments which we know anecdotally can vary from patient-to-patient.

Additionally, pharmacists are accessible to people living with all severities of plaque psoriasis, and can provide an invaluable point of information and support throughout a person's life with the condition.

For more information, visit the Psoriasis Association at www.psoriasis-association.org.uk and www.psoteen.org.uk, or call 01604 251 620.

REFERENCES

1. British Association of Dermatologists, Psoriasis: An Overview http://www.bad.org.uk/shared/get-file.ashx?id=178&itemtype=document (2015).

kyntheum®▼

Brodalumab

What does PASI 100 mean to Simon?

Kyntheum®: Confidence starts with clearance

Kyntheum® (brodalumab) is indicated for the treatment of moderate to severe plaque psoriasis in adult patients who are candidates for systemic therapy.[1]

LEO®

- Kyntheum® targets the IL-17 pathway in a unique way, being the only biologic treatment for moderate to severe psoriasis that selectively targets the IL-17 receptor subunit A[2]
- Patients achieving PASI 100 are less likely to experience impairment to their health-related quality of life than those with residual disease[4]
- Kyntheum® is superior to ustekinumab at achieving PASI 100 at 12 weeks[3]

44% vs. 22%* (AMAGINE-2)[3]

37% vs. 19%* (AMAGINE-3)[3]

*P<0.001

- Kyntheum® has a simple induction schedule and an acceptable safety profile[5]

Abbreviated Prescribing Information for Kyntheum®▼(brodalumab) 210 mg solution for injection in pre-filled syringe Please refer to the full Summary of Product Characteristics (SmPC) (www.medicines.org.uk/emc) before prescribing. ▼ This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions. **Indication:** Treatment of moderate to severe plaque psoriasis in adult patients who are candidates for systemic therapy. **Active ingredient:** Each pre-filled syringe contains 210 mg brodalumab in 1.5 ml solution. 1 ml solution contains 140 mg brodalumab. **Dosage and administration:** *Posology: Adults:* The recommended dose is 210 mg administered by subcutaneous injection at weeks 0, 1, and 2 followed by 210 mg every 2 weeks. Consideration should be given to discontinuing treatment in patients who have shown no response after 12-16 weeks of treatment. Some patients with initial partial response may subsequently improve with continued treatment beyond 16 weeks. Administer by subcutaneous (SC) injection. Each pre-filled syringe is for single use only. *Elderly:* No dose adjustment recommended. *Hepatic and renal impairment:* No dose recommendations can be made. *Children and adolescents below the age of 18 years:* Safety and efficacy of Kyntheum have not been established. *Method of administration:* Kyntheum should not be injected into areas where the skin is tender, bruised, red, hard, thick, scaly, or affected by psoriasis. The pre-filled syringe must not be shaken. After proper training in SC injection technique, patients may self-inject Kyntheum when deemed appropriate by a physician. Patients should be instructed to inject the full amount of Kyntheum according to the instructions provided in the package leaflet. **Contraindications:** Hypersensitivity to the active substance or to any of the excipients. Active Crohn's disease. Clinically important active infections (e.g. active tuberculosis). **Precautions and warnings:** *Crohn's disease:* Exercise caution when prescribing Kyntheum to patients with a history of Crohn's disease. They should be followed for signs and symptoms of active Crohn's disease. If patients develop active Crohn's disease, treatment should be discontinued permanently. *Suicidal ideation and behaviour:* A causal association between treatment with Kyntheum and increased risk of suicidal ideation and behaviour has not been established. Carefully weigh the risk and benefit of treatment with Kyntheum for patients with a history of depression and/or suicidal ideation or behaviour, or patients who develop such symptoms. Patients, caregivers and families should be advised of the need to be alert for the emergence or worsening of depression, suicidal ideation, anxiety, or other mood changes, and they should contact their healthcare provider if such events occur. If a patient suffers from new or worsening symptoms of depression and/or suicidal ideation or behaviour is identified, it is recommended to discontinue treatment with Kyntheum. *Infections:* Kyntheum may increase the risk of infections. Caution should be exercised when considering the use of Kyntheum in patients with a chronic infection or a history of recurrent infection. Patients should be instructed to seek medical advice if signs or symptoms suggestive of an infection occur. If a patient develops a serious infection, they should be closely monitored and Kyntheum should not be administered until the infection resolves. Kyntheum should not be given to patients with active tuberculosis. Anti-tuberculosis therapy should be considered prior to initiation of Kyntheum in patients with latent tuberculosis. *Reduced absolute neutrophil count:* A decrease in absolute neutrophil count, generally transient and reversible, has been observed in 5.6% of patients receiving Kyntheum. *Vaccinations:* It is recommended that patients be brought up-to-date with all immunisations in accordance with local immunisation guidelines prior to initiation of treatment with Kyntheum. Live vaccines should not be given concurrently with Kyntheum. The safety and efficacy of Kyntheum in combination with immunosuppressants, including biologics, or phototherapy have not been evaluated. **Drug interactions:** Live vaccines should not be given concurrently with Kyntheum. **Fertility, pregnancy and lactation:** *Women of childbearing potential:* Use an effective method of contraception during treatment and for at least 12 weeks after treatment. *Pregnancy:* There are no or limited amount of data from the use of brodalumab in pregnant women. As a precautionary measure, it is preferable to avoid the use of Kyntheum in pregnancy. Benefit risk for exposure of the infant to live vaccines following third trimester exposure to Kyntheum should be discussed with a physician. *Breast-feeding:* It is unknown whether brodalumab is excreted in human milk. A risk to the newborns/infants cannot be excluded. Whether to discontinue breast-feeding or discontinue Kyntheum therapy should be decided, taking into account the benefit of breast-feeding for the child and the benefit of therapy for the woman. *Fertility:* No data are available on the effect of brodalumab on human fertility. **Side effects:** *Common (≥1/100 to <1/10):* Influenza, tinea infections (including tinea pedis, tinea versicolor, tinea cruris), neutropenia, headache, oropharyngeal pain, diarrhoea, nausea, arthralgia, myalgia, fatigue, injection site reactions (including injection site erythema, pain, pruritus, bruising, haemorrhage). *Uncommon (≥1/1,000 to <1/100):* Candida infections (including oral, genital and oesophageal infections), conjunctivitis. **See SmPC for a full list of side effects. Precautions for storage:** Store in a refrigerator (2°C-8°C). Do not freeze. Keep the pre-filled syringe in the outer carton in order to protect from light. Kyntheum may be stored at room temperature (up to 25°C) once, in the outer carton, for a maximum single period of 14 days. Once Kyntheum has been removed from the refrigerator and has reached room temperature (up to 25°C) it must either be used within 14 days or discarded. **Legal category:** POM. **Marketing authorisation number and holder:** EU/1/16/1155/001, LEO Pharma A/S, Ballerup, Denmark. **Basic NHS price:** 2 pre-filled syringes: £1,280 (each syringe contains 210 mg/1.5 ml). **Last revised:** March 2018

Further information can be found in the Summary of Product Characteristics or from: LEO Pharma, Horizon, Honey Lane, Hurley, Berkshire SL6 6RJ. e-mail: medical-info.uk@leo-pharma.com

Reporting of Suspected Adverse Reactions

Adverse events should be reported. Reporting forms and information can be found at: www.mhra.gov.uk/yellowcard or search for MHRA Yellow card in the Google Play or Apple App Store.

Adverse events should also be reported to Drug Safety at LEO Pharma by calling +44 (0)1844 347333 or e-mail medical-info.uk@leo-pharma.com

® Registered trademark

References:
1. Kyntheum® Summary of Product Characteristics. September 2017.
2. Campa M, et al. *Dermatol Ther* 2016;6:1-12.
3. Lebwohl M, et al. *N Engl J Med* 2015;373:1318-1328.
4. Strober B, et al. *J Am Acad Dermatol* 2016;75:77-82.
5. Papp KA, et al. *Br J Dermatol* 2016;175(2):273–86.

Date of preparation: June 2018
MAT-14787

LEO®

BACK TO SCHOOL SPECIAL

BEHIND THE BOOKS

With a flurry of students gearing up to enter their next phase of education, it's time to find out more about the personalities behind the lessons propelling them forward. In this edition of SPR, Craig McDonald dissects a day in his life as a lecturer at Robert Gordon University's School of Pharmacy and Life Sciences, as well as a teacher practitioner at Rowlands Pharmacy.

Craig McDonald

When I was asked to write this 'day in the life' piece, I really did not know where to start. My life varies day-by-day at the moment for various reasons, and not least because I have two young children that keep me on my toes, often entertained, and sometimes a little stressed! Professionally, things aren't that much different as I am fortunate enough to have two complementary roles. I have worked as a pharmacy manager for Rowlands pharmacy since 2005, and since then have enjoyed being part of three great pharmacy teams. Since 2014 I have continued in this role part-time while taking up a part-time lectureship in Pharmacy Practice at Robert Gordon University (RGU) in Aberdeen.

I am well-supported by the university in continually developing my teaching practice, and since joining RGU I have recently gained Fellow of the Higher Education Academy status. In order to achieve this, I returned to (part-time) student life, although it was quite different this time given the subject matter and the stage of life I was at! Through peer review, I learned how I could develop as a teacher and thoroughly enjoyed the process. It was also useful to understand the challenges faced by the students from their perspective by completing various assignments and assessments.

I find that learning about how people learn is fascinating and am currently working towards a Postgraduate Certificate in Professional Studies (Academic Practice). This has seen me return to the classroom in recent months, although I can still join in by participating online by viewing recordings of the class and posting on forums.

I begin my work week at the university. I love working at the campus on the scenic banks of the River Dee and the short walk from the car park is always appreciated. My working day can look quite different depending on the time of year. When the students are around during the teaching period, there is a real 'buzz' on the campus as they are truly the life-blood of the university. The 'buzz' also means that there is teaching to do! I am responsible for co-ordinating an MPharm stage one Pharmacy Practice module, although I am involved in teaching students at all levels. My colleagues and I use a variety of different teaching methods, including lecturing, small group teaching, simulation learning, and e-learning technologies. During a typical teaching week, it's likely that I will be involved in most of these activities – but I will discuss some of my highlights from the year.

In stage one, we teach extemporaneous dispensing in the modern formulation laboratory. My colleagues, the students, and I don our lab coats and safety glasses and then manufacture some simple preparations, such as sodium bicarbonate ear drops and zinc oxide ointment. I believe that these sessions help the students develop safe, hygienic, and accurate working practices, along with calculation and record-keeping skills. They can also identify how science underpins the practice of pharmacy.

I particularly enjoy teaching in the simulation centre where we mirror the pharmacy setting. This environment adds to the realism for the students, and provides a safe place where they can learn valuable skills and use knowledge from other teaching which is tremendously satisfying to see. In stage one simulations, we work on basic dispensing skills, and in stage two we develop this further to include more of the legal and ethical challenges encountered in practice. The environment lends itself to working closely with both the students and colleagues. I am particularly fortunate in my academic role, as I am never far away from someone to discuss a query or a problem. Occasionally, coffee and cake is involved too...

Ethics is an area discussed in-depth during small group 'tutorial' sessions. I have a tutorial group of around a dozen students who I get to know well during the academic year. The discussions are confidential so are not suitable for publication in a magazine!

However, I can say that I have enjoyed getting to know my tutorial groups over the years and we have had many interesting and thought-provoking discussions around legal and ethical issues during classes. My ongoing involvement in practice is a benefit where I feel that I can add depth to the teaching based around real life scenarios. I do subscribe to the saying 'as you teach, you learn' and through discussion with students or in developing teaching activities I often find I learn something new. This will definitely be useful when it comes to populating my 'unplanned learning' CPD records for revalidation!

Further highlights for me include Interprofessional Learning events. I am privileged to be part of a team of multidisciplinary colleagues from RGU and University of Aberdeen who work together to design and deliver Interprofessional Learning activities to students from 10 professions across both institutions. The move towards health and social care integration in order to provide safe and effective care for patients requires working as a multidisciplinary team and interprofessional education supports this change at an early stage. I am of the opinion that beginning the communication process between healthcare professionals at the undergraduate stage is vital to encourage a supportive community of practice from an early stage.

Preparing students for their future career is highly important to the university and is considered carefully during the planning and delivery of course activities. From stage one on the MPharm, we involve external stakeholders in the delivery of the course and learning in practice is becoming ever more vital. In the coming weeks, I will be planning one of the first assessment tasks for our stage one students which involves them preparing a group presentation about a practicing pharmacist they have researched.

In groups, the students design and peer review a questionnaire to gather information in advance of their presentations. I always enjoy hearing about what the students have learned about the pharmacist, but also about how they have worked together as a team to design the questionnaire and the presentation itself.

In completing this task, students may learn about career paths that they'd not thought possible when joining the course, such as veterinary pharmacy, or industrial pharmacy. If you are a pharmacist interested in participating, please do contact me!

As the week draws to a close, I return to Rowlands either one or two days per week. During the teaching period, I am seconded from the pharmacy for a day to teach in the university which allows me some flexibility and additional time to perform academic duties. Having direct involvement with the public and delivery of services along with the pharmacy team is something I find rewarding, and learning opportunities present themselves yet again! The experiences from practice feed back to my academic role – whether it is an encounter I had with a patient, or a new service that we are providing in the pharmacy.

Opportunities for experience of pharmacy practice are included throughout the course and I have the responsibility of arranging placement visits for our students in stage one, working with colleagues at Aberdeen Royal Infirmary and Boots who kindly provide this. Students use their learning in context of the practice setting and it is recognised that this 'experiential' learning is a very effective method. Placement opportunities in other stages of the course are varied, and working with valued industry partners is crucial to their success. As well as benefiting the students' learning for success throughout their studies, exposure to the workplace also allows students and employers alike to get to know each other and find the right job at the end of their time at university.

The opportunities for graduates are vast and it is heartening to see students that I have had the pleasure of working with as a manager, a pre-reg tutor, or lecturer going on to perform a variety of roles to a very high standard.

For the future health of our profession, but ultimately our population, I hope that the expertise of pharmacists and pharmacy teams continues to be invested in. I look forward to continuing to work with the next generation of pharmacists.

BACK TO SCHOOL SPECIAL

TO VITAMIN D OR NOT TO VITAMIN D?

Welcoming in the late summer sun – when the climate mercifully allows us to – is a simple endeavour. However, mastering the balance of receiving sufficient vitamin D without tempting the risk of over-exposure isn't, especially with the rise of new research in this area. In this edition, SPR takes the increasingly hot topic to task.

Outcries concerning – and calls demanding – increased skin protection during the summer months are now so familiar they can seemingly be traced back to the origin of the sun itself.

But new areas of debate are now woven into what was previously deemed a straightforward conversation; specifically the task of interspersing the potential of sun damage with the need for vitamin D.

Adding further weight to the balancing act has been the highlighted need for more rigorous protection of children against the harmful effects of the sun. In fact, massively contributing to the sector's outpour of renewed urgency are new study results which suggest that young ones may experience much more significant DNA damage from small amounts of sun exposure than adults.

The new findings of 32 children under the age of 10 was undertaken at a 12-day summer camp in Poland – and subsequently featured in the British Journal of Dermatology – in which the children's skin types ranged from pale white skin that burns easily, to olive skin that burns minimally.

In an effort to gauge the effects, the researchers, led by Professor Antony Young at King's College London, measured levels of vitamin D alongside a urine biomarker of DNA damage that can lead to skin cancer, known as CPD, which is produced as a result of the skin repairing this damage. Additionally, the scientists, in an EU-funded collaboration with Professor Joanna Narbutt of the Medical University of Lodz, Poland, and Dr Peter Philipsen, of the Bispebjerg University Hospital in Copenhagen, measured exposure to UV rays via an electronic device on the wrist that absorbed the rays. The children also filled in diaries with information about sunbathing, sunscreen use, and sunburn.

IN THE LIGHT OF DAY

The research can bolster how we conduct daily practice and provide assistance to patients – being cautious that children may be more sensitive to the damaging effects of the sun than even previously thought, or that they could be better at repairing the damage. This is as the data discovered a 25 per cent increase in average vitamin D concentrations in blood, and nearly 13 times more CPD was measured on average at the end of the 12-day beach holiday in comparison to levels at the start.

The starkness of the figures is compounded by the knowledge that the final levels of CPD in the children were similar to those measured in Danish adults as part of a different study carried out by the same researchers which looked at sun exposure on a shorter holiday in Tenerife, despite the fact that the weather was not particularly sunny during the course of the children's summer camp.

BEATING THE HEAT

So, where do we go from here? As we know, sun exposure is the main source of vitamin D, which is absolutely essential for healthy bone development in children. However, sunburn in childhood is a recognised risk factor for skin cancer in older age, and its incidence is increasing in most Western countries.

Conveying where the issue of contention now lies, the study's senior author, Professor Antony Young, from the St John's Institute of Dermatology at King's College London, said, 'Many parents are already very careful about protecting their children from the harmful impact of the sun, but it can be a confusing message when trying to balance this with the need for children to be healthy, exercise, play outside, and produce sufficient levels of vitamin D.

'Our study suggests that only small amounts of exposure to the sun are needed to ensure vitamin D sufficiency so we should make sure that children always have ample sun protection when playing outside for long periods. This should be in the form of sunscreen, clothing, and hats, and the use of shade, even when you may not judge the weather to be that sunny.'

SKIN CANCER: WHAT APP-ENED?

Despite the horde of options on the horizon, it appears that in the scramble to bring successful apps for the diagnosis of skin cancer to market there is a concern that a lack of testing is risking public safety, according to researchers at the British Association of Dermatologists' Annual Meeting in Edinburgh.

Matthew Gass, of the British Association of Dermatologists, explained, 'These new technologies for the diagnosis of skin cancer are exciting, but the varying quality available makes it a difficult landscape for people to navigate. These apps are not a replacement for an expert dermatologist, but they can be a useful tool in the early detection of skin cancer.

'We urge people who are thinking about using these apps to research how they work and to be cautious regardless of their recommendations. If a patch of skin, such as a mole is changing in shape or size, not healing or just doesn't seem right, go and see your GP regardless of what any app tells you.'

SKIN CANCER: THE FAST FACTS

According to the British Association of Dermatologists:

- Skin cancer is the most common cancer in the UK, and rates have been climbing since the 1960s
- Every year over 230,000 new cases of non-melanoma skin cancer (NMSC) – the most common type – are diagnosed in the UK
- In addition to NMSC, there are approximately 16,000 new cases of melanoma every year, resulting in around 2,285 UK deaths annually

FOR SUNBURN IT'S A FIRST

Soleve is the **first and only** sunburn relief lotion with the painkilling power of **ibuprofen.**

Soleve offers effective relief from the discomfort of accidental sunburn.

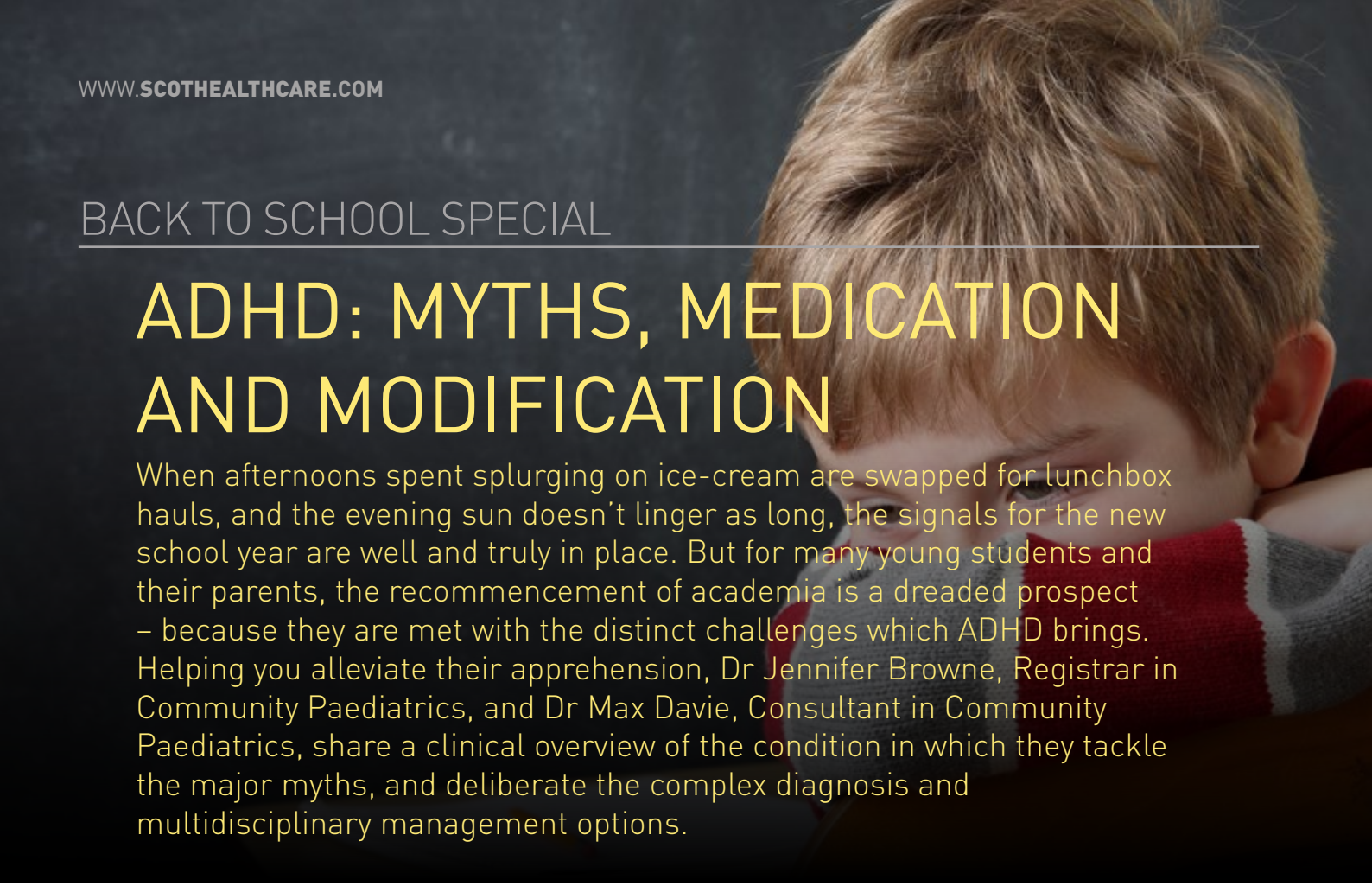
- Relieves pain
- Contains isopropyl myristate, an active ingredient to soothe the skin
- Moisturises for comfort
- Clinically proven

A perfect recommendation for your customers whether at home or going away.

REMEMBER: always recommend safe sun practices.

For mild to moderate sunburn in adults and children over the age of 12 years. Always read the label.

SOLEVE SUNBURN RELIEF Trademark and Product Licence held by Diomed Developments Ltd, Hitchin, Herts, SG4 7QR, UK. Distributed by DDD Ltd, 94 Rickmansworth Road, Watford, Herts, WD18 7JJ, UK. **Indications:** For the relief of pain associated with mild to moderate sunburn in adults and children over the age of 12 years. **Directions:** Apply the lotion to the affected area(s) as soon as possible after the first sign of any sunburn, and massage gently into the skin. Repeat as required, if necessary up to 8 times daily, but leaving at least 2 hours between applications. Treatment should be continued for a maximum of two to three days, by which time the symptoms should have subsided. **Contraindications:** Not to be used in cases of sensitivity to any of the ingredients, particularly if asthmatic or suffering from allergic disease, and have previously shown hypersensitivity to aspirin, ibuprofen or related painkillers. Not to be used on broken skin. Not to be used during pregnancy or lactation. Not to be used concurrently with any other product containing ibuprofen or any other NSAID. **Precautions:** Soleve™ is not a sunscreen or sunblock, and will not protect skin from the sun. Not recommended for use on children under the age of 12 years. Seek medical advice if symptoms worsen or persist, or if sunburn is severe. Although systemic absorption of topically applied ibuprofen is less than for oral dosage forms, patients with asthma, an active peptic ulcer or a history of kidney problems, should seek medical advice before using the lotion. Keep away from the eyes and mucous membranes. For external use only. **Side effects:** The initial application of Soleve™ to sunburned skin may occasionally be associated with a temporary sensation of tingling or stinging. In normal use, systemic side effects are very rare, but may occasionally include hypersensitivity reactions and, in susceptible individuals, renal and/or gastrointestinal side effects. Please refer to the Product SPC for full details. **Legal category and cost:** GSL RRSP £9.95. Further information is available from DDD Ltd, at the address above.



BACK TO SCHOOL SPECIAL

ADHD: MYTHS, MEDICATION AND MODIFICATION

When afternoons spent splurging on ice-cream are swapped for lunchbox hauls, and the evening sun doesn't linger as long, the signals for the new school year are well and truly in place. But for many young students and their parents, the recommencement of academia is a dreaded prospect – because they are met with the distinct challenges which ADHD brings. Helping you alleviate their apprehension, Dr Jennifer Browne, Registrar in Community Paediatrics, and Dr Max Davie, Consultant in Community Paediatrics, share a clinical overview of the condition in which they tackle the major myths, and deliberate the complex diagnosis and multidisciplinary management options.

Attention deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder that is common in childhood. It encompasses a range of specific behaviours that are pervasive across all situations. The key signs are; inattentiveness, hyperactivity, and impulsivity. To be diagnosed, children must have difficulty with all three of these areas.

WHAT'S THE CAUSE?

There is no single identifiable cause for ADHD. However, there does seem to be a strong genetic component as it is common for the diagnosis to be present in family members. There are common genetic risk variants that have been identified in the etiology of those with a diagnosis of ADHD and symptoms within the general population. (1)

There is also emerging evidence of subtle neurophysiological differences in children with ADHD. However, it's also important to note that children with ADHD are very sensitive to problems in their environment.

It is common for children with ADHD to have associated conditions, such as autism, learning disability, dyspraxia and tic disorders. Current research is looking into whether genetic variants already implicated with ADHD diagnosis are also associated with these co-morbid conditions. (1)

HOW IS IT DIAGNOSED?

A diagnosis of ADHD is made by a specially trained paediatrician. There is not one specific test for diagnosis. It is based on:

- A full assessment that includes psychosocial, psychiatric, and behavioural history of all aspects of the child's life
- A full developmental history and assessment
- The use of standardised questionnaires, such as the Conner's questionnaire and observation of the child (2)

It's important to remember that the Conner's questionnaire is a rating scale that is useful for school and parental assessment, however this should be always be used in conjunction with a supportive history.

WHAT IS THE MANAGEMENT?

ADHD requires multidisciplinary management, often with CAMHS involvement.

The main management priorities are:

1. Understanding the condition and learning ways to live with it (psychoeducation)
2. Parent support via group-based parent training / education programmes
3. Individual support via group or individual psychological therapy (not widely available)
4. Support in school
5. Medication

Psychoeducation is the first-line management for children with ADHD and is recommended by both the National Institute of Health Care and Excellence (NICE) and the European Guidelines.

The aim is to inform children and their carers about the condition and ways in which to manage it. (3) Young people being able to understand and manage their condition independently becomes essential as they transition into adulthood. There are various ways in which psychoeducation can be delivered, including through books and educational videos. With widespread use of technology, there is also a focus on using tablets and computer games as part of the education, with some research showing successful outcomes. (4)

Parent support is usually provided by group parenting intervention. This has an excellent evidence base for decreasing levels of disruptive behaviours in children, and parents need to be encouraged to engage – they are not just for 'bad parents' but for normal parents who want to be 'super parents' for their children. ADHD is a special educational need and schools need to make provision for the child's need using the SEN code of practice. (2)

Pharmacological management for ADHD should only be considered if symptoms continue to cause significant impact once non-pharmacological treatment has been tried. (3, 4)

The main classes of medication are detailed in the following table:

Stimulants	Non-Stimulants
Methylphenidate	Atomoxetine
Dexamfetamine	Guanfacine

Methylphenidate is the first-line drug used in ADHD. It has an established evidence base, with effects mediated via the central nervous system. However, it is not without risk, and children should be closely monitored following treatment initiation. (5)

The most common side-effects are:

- Reduced appetite and weight
- Increased blood pressure and heart rate
- Reduced growth

NICE recommends that all children have baseline observations and measurements prior to starting medication and then further assessments at regular intervals while treatment is ongoing with regular review as to its impact and necessity. It should also be noted that medication compliance can often be poor and behavioural therapies should be used in conjunction to try and increase knowledge of why medication is used and improve adherence.

DISPELLING THE MYTHS OF ADHD

'IT ONLY AFFECTS BOYS'

It is true that boys are more commonly diagnosed with ADHD than girls. However, girls are likely to be under-represented and under-diagnosed. There is some thinking that girls may display more symptoms related to inattentiveness and less hyperactivity, resulting in them being unnoticed. A large European study, looking at gender differences, found that there was no significant difference between boys and girls in terms of core ADHD symptoms, age of onset, levels of impairment or treatments received, but despite this, girls were still under-referred. This may be the result of girls being more able to function within social environments and interact with peers more effectively than boys with similar difficulties. (6)

Acknowledgement of this gender difference is becoming increasingly important. Recent research has shown that self-harm is far more prevalent among girls with ADHD, making it crucial that there is a good understanding of differences in presentation. (7) Being undiagnosed also leads to an increased risk of anti-social behaviour, emotional and social problems, as well as learning difficulties. Early intervention is key to preventing long-term complications.

'IS ADHD BEING OVER-DIAGNOSED IN THE UK?'

That depends on what you think the 'right' levels of diagnosis ought to be. It's hard to be very clear about how many children are diagnosed in the UK, but the figure seems to be about two per cent, which is, depending on how broadly you want to define the condition, either rather lower than it ought to be, or about right.

It's important to say, however, that the fact that we do not systematically over-diagnose children does not mean that no children have been diagnosed incorrectly. Equally, some children are still not diagnosed, with significant negative

'IT'S JUST POOR PARENTING, ISN'T IT?'

It is common for people to have the belief that ADHD is the result of poor parenting practices and that it is a label that makes an excuse for this. Hopefully this article will have challenged this belief. There is research ongoing that has identified differences in brain structure of large numbers of people with ADHD, which will continue to provide support against this belief.

CONCLUSION

ADHD is a common neurodevelopmental condition which, unaddressed, can lead to significant harm. Management is mainly a mixture of environmental modification, and, if necessary, medication.

Medication for ADHD is controversial, usually due to misunderstandings about its rationale and the extent of use.

However, it remains true that it needs to be used with caution and under specialist supervision.

REFERENCES

1. Brickell I et al. 2018. The contribution of common genetic risk variants for ADHD to a general factor of childhood psychopathology. Mol Psychiatry; Epub ahead of print
2. https://www.gov.uk/government/publications/send-code-of-practice-0-to-25
3. NICE guideline [NG87]. 2018. Attention deficit hyperactivity disorder: diagnosis and management. https://www.nice.org.uk/guidance/ng87
4. Powell L et al. 2017. What is the current level of evidence for the use of currently available technologies in facilitating the self-management of difficulties associated with ADHD in children and young people? A systematic review. Eur Child Adolescent Psychiatry; Epub ahead of print
5. Oxley C et al. 2018. Improving the quality of physical health monitoring in CAMHS for children and adolescents prescribed medication for ADHD. BMJ Open Qual; 7(2), e000213
6. Novik T et al. 2006. Influence of gender on Attention-Deficit/Hyperactivity Disorder in Europe – ADORE. European Child & Adolescent Psychiatry; 15(S1), I/15 – I/24
7. Balaz J et al. 2018. Attention-deficit hyperactivity disorder and nonsuicidal self-injury in a clinical sample of adolescents; the role of comorbidities and gender. BMC Psychiatry; 18(34)

BACK TO SCHOOL SPECIAL

GETTING AN EARFUL

Despite the fact that ear wax is normal and serves a purpose, if produced in excess, it can trigger impairment, pain, or a stream of other symptoms. How can we help patients, and banish the danger associated with build-up? Audiologist Vaitheki Maheswaran – on behalf of the largest charity for people with hearing loss in the UK, Action on Hearing Loss – updates us on the go-to guidelines and courses of action available.

Excessive ear wax is one of the most common causes of temporary hearing loss; in some cases it covers the eardrum completely. It is also a major cause of hearing aid failure.

People with hearing loss should receive appropriate information on wax management, and wax removal services should be accessible to all.

Current practice for the removal of ear wax varies throughout the country. There are different methods of wax removal – some are not clinically appropriate or suitable for some individuals, and some methods are not recommended at all.

SYRINGING

This process in which a large manual syringe is used to pump water into the ear canal is now deemed unsafe and should not be used. This procedure has now been replaced by irrigation and is no longer recommended as per the NICE guideline on adult hearing loss.

IRRIGATION

An electronic irrigation machine is used to remove ear wax. A hand-held nozzle gently pumps water into the ear canal at a controlled and steady rate. This is unsuitable for individuals who suffer from a perforated eardrum, ear infection, and recent ear surgery, or had a negative experience of irrigation. This is usually performed by trained nurses in GP surgeries and occasionally doctors.

MICROSUCTION

Gentle suction is used under a microscope to extract ear wax and is suitable for individuals with perforated eardrums, ear infections, and recent ear surgery. This is usually performed by a trained professional (specialist nurse, doctor, or audiologist) in a hospital setting, in ENT clinics, and occasionally in GP surgeries.

MANUAL REMOVAL OF WAX

This uses probes or forceps and is considered effective, but can cause trauma to the ear canal, depending on the experience and training of the professional.

WAX-SOFTENING AGENTS

These are used to soften wax prior to irrigation or microsuction. Some services also prescribe drops long-term which is ineffective.

You may have seen ear candling advertised by certain alternative health practitioners for ear wax removal. This involves inserting a hollow candle into the ear and lighting the opposite end. However, medical researchers have found that this method of wax removal could be dangerous and there is no evidence of effectiveness.

NHS audiology services advise their patients to ensure that their ears are clear of wax, by visiting the GP, before they attend their initial audiology appointment. When a patient does have excessive ear wax, they are advised to attend the GP surgery where the practice nurse will usually advise on wax management. The patient may be prescribed a softening agent or advised to one such as almond or olive oil, in the affected ear, provided there are no other issues. The practice nurse may subsequently irrigate the ear, if required. When this is not appropriate, the patient might be referred to the ENT department for microsuction.

We have heard reports that some GP surgeries no longer provide wax removal services. There have also been reports of patients being passed between their GP surgery and audiology or ENT departments, with no one taking responsibility for wax removal.

However, according to the NICE guideline on adult hearing loss, ear wax removal for adults should be offered in primary care or community ear care services if the ear wax is contributing to hearing loss or other symptoms, or if an impression needs to be taken of the ear canal. Furthermore, if irrigation is unsuccessful after the second attempt, the individual should be referred to a specialist ear care service or an ear, nose, and throat service for removal of earwax.

Outside the NHS, wax removal is available privately to people who are prepared to pay for it. Wax-softening agents are also available at pharmacies without prescription.

For more information about Action on Hearing Loss, visit www.actiononhearingloss.org.uk.

The No.1 selling range is on TV now, so your customers will hear all about Otex and our extensive range of products.

Are you stocked up?

Otex®

Be clear to hear

www.otexear.com

OTEX Product Licence, Trademark and medical device registrations held by Diomed Developments Ltd., Hitchin, Herts, SG4 7QR, UK. Distributed by DDD Ltd., 94 Rickmansworth Road, Watford, Herts, WD18 7JJ, UK. **Indications: Otex Ear Drops**, **Otex Express Ear Drops** and **Otex Olive Oil Ear Drops:** An aid in the removal of hardened ear wax. **Otex Express Combi Pack:** Complete ear wax removal kit comprising Otex Express Ear Drops to initially soften and disperse wax, and a bulb syringe to then gently cleanse the ear. Further information is available from DDD Ltd., at the above address. **Legal Category:** Otex Ear Drops 8ml [P], Otex Express Ear Drops, Otex Express Combi Pack and Otex Olive Oil Ear Drops: Medical Device.*Source: Based on sales data MAT 12/2017.

BIOSIMILAR MEDICINES: MATTERS OF ENGAGEMENT

In this issue's column, Warwick Smith, Director General of the British Biosimilars Association, points out that the success of biosimilars is not only reliant on wide collaboration, but the nature of the plan for carrying out this joined-up strategy.

Warwick Smith

A hallmark of the biosimilar story so far in the UK has been collaboration. Manufacturers working alongside regulators, clinicians, and NHS England, and with patients, has helped foster an environment of understanding and acceptance where the benefits of these critical medicines is now being experienced and can be anticipated to grow in the coming years. This can unlock further value at a time of enormous budgetary pressure in the NHS, as well as driving access, allowing more patients to be treated for less money.

This collaboration and partnership has been necessary. Unlike generic medicines, the market for biosimilars is not automatically created at the on-set of competition following the end of a biologic product's patent period. In the traditional generics market, an absence of brand names in most cases, and the fact that doctors are trained at medical school to prescribe by international non-proprietary name, helps underpin the competitive environment which saves the NHS £13 billion a year.

However, in line with the Medicines and Healthcare products Regulatory Agency guidelines, biological medicines – including biosimilars – must be marketed and prescribed by brand name to ensure that the patient receives the prescribed product without substitution at the pharmacy level and to support ongoing phar macovigilance of the individual products. This, combined with the fact that clinicians have sought greater levels of education and assurance about the regulation of biosimilars, has meant that increased collaboration and engagement is needed to ensure take-up and to realise the benefits.

This has been evidenced by NHS England's creation of the National Biosimilar Medicines Programme Board on which all interested parties are represented. Last year, four Regional Medicines Optimisation Committees (RMOCs) were created with a remit to provide advice and make recommendations on the optimal use of medicines for the benefit of patients and the NHS. The rationale is that they will bring together decision-makers and clinicians across the four regions of England, to share best practice, understand the evidence base, co-ordinate action, and so reduce unwarranted variation, thus improving outcomes and value.

Biosimilars have featured heavily in their discussions and the RMOCs have produced an advisory briefing paper ahead of the forthcoming Adalimumab launch as an example.

This collaborative approach is also very well exemplified elsewhere by the Joint Working Partnership between Sandoz and the Royal Marsden Hospital as part of the Cancer Vanguard. Sandoz, alongside healthcare professionals from the Marsden, developed an education and engagement programme about the use of biosimilar Rituximab.

The programme aims to improve healthcare professionals' understanding of biosimilars and help them to better inform patients about their use and assist in their timely introduction when appropriate. The project has developed resources and tools to help clinicians in the NHS consider any biosimilars, regardless of who makes them.

However, while there are examples of collaboration making a clear difference, particularly on an individual product basis, there now needs to be a more holistic and consistent approach being replicated for future launches to ensure that benefits are fully realised. NHS England Chief Executive, Simon Stevens, has been clear that he sees annual savings of up to £300 million from bioisimilar uptake within the next few years.

However, to meet this target, a more detailed approach is required which allows commissioners to adopt an effective common approach. NHS England has played a fantastic role in co-ordination and collaboration to date and it is also very good at outlining a future vision and direction of travel. However, a clearer, more granular, roadmap is required which could include a consistent, templated approach to clinical implementation. We're seeing many examples of good individual decision-making which is driving change, but there needs to be a greater emphasis on creating a cohesive plan moving forward.

Collaboration has been the bedrock of the success of biosimilars to date and all parties have played their part. However, as these important medicines become increasingly common, it's imperative that a consistent approach is widely accessible which builds on the shared experience to date and delivers full value.

MEDCOM

SCOTHealthcare.com

WANT MORE?

Keep up-to-date with the latest healthcare news across Scotland and check out the previous editions of Scottish Pharmacy Review. We round up the latest research and developments affecting the industry, so that you don't have to.

Visit www.scothealthcare.com NOW!

JOIN THE CONVERSATION

@MEDCOMscot

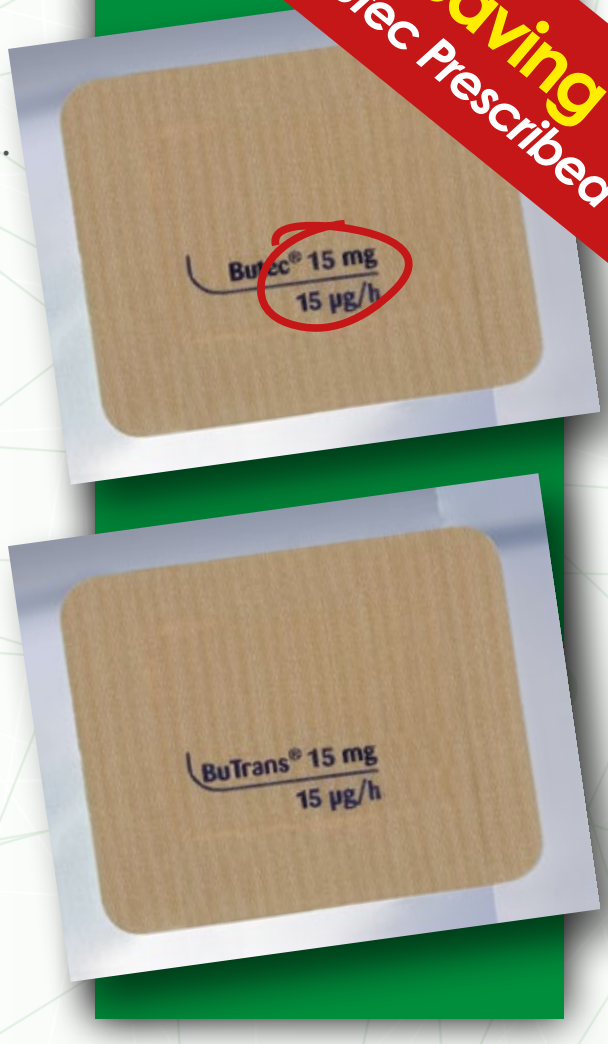
Medical Communications Ltd

www.scothealthcare.com

Butec®

Buprenorphine 7 Day Matrix Patch 5µg/h, 10µg/h, 15µg/h, 20µg/h

55% Saving when Butec Prescribed



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.

For further information and latest pricing please contact Qdem enquiries on: **01223 426929**

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*** **PRESCRIBING INFORMATION** United Kingdom**PLEASE READ THE SUMMARY OF PRODUCT CHARACTERISTICS BEFORE PRESCRIBING.PRESENTATION *Butec*** 5 µg/h, 10 µg/h, 15 µg/h, 20 µg/h. Transdermal beige patches containing buprenorphine. **INDICATIONS** Treatment of non-malignant pain of moderate intensity when an opioid is necessary for obtaining adequate analgesia. ***Butec*** is not suitable for the treatment of acute pain. **DOSAGE AND ADMINISTRATION *Butec*** should be administered every 7th day. Elderly and adults over 18 years only: Use the 5 µg/h patch for at least the first 3 days of treatment, before increasing the dose if necessary. Short-acting supplemental analgesics may be required during titration until analgesic efficacy is attained. Do not use more than two patches at a time, up to a maximum dose of 40 µg/h. **CONTRA-INDICATIONS** Known buprenorphine or excipient hypersensitivity, opioid-dependent patients, narcotic withdrawal treatment, respiratory depression, use of monoamine oxidase inhibitors (MAOIs) within the past 2 weeks, myasthenia gravis, delirium tremens. **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). **PREGNANCY AND LACTATION *Butec*** should not be used during pregnancy or in women of childbearing potential who are not using effective contraception. The use of ***Butec*** during lactation should be avoided. **SIDE-EFFECTS Very common** (≥1/10) and common (≥1/100, <1/10) side-effects are anorexia, confusion, depression, insomnia, nervousness, anxiety, headache, dizziness, somnolence, tremor, dyspnoea, constipation, nausea, vomiting, abdominal pain, diarrhoea, dyspepsia, dry mouth, pruritus, erythema, rash, sweating, exanthema, muscular weakness, application site reaction, tiredness, asthenic conditions, peripheral oedema.**Uncommon** (< 1/100) but potentially serious side-effects are hypersensitivity, anaphylactic/anaphylactoid reaction, affect lability, restlessness, agitation, euphoric mood, hallucinations, libido decreased, aggression, psychotic disorder, drug dependence, mood swings, depersonalisation, sedation, dysarthria, 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, biliary colic, urticaria, dermatitis contact, face oedema, urinary retention, erectile dysfunction, sexual dysfunction, oedema, drug withdrawal syndrome (including neonatal), chest pain, alanine aminotransferase increased, accidental injury, fall. Please consult the SPC for details of other side-effects. **LEGAL CATEGORY** CD (Sch3) POM **PACKAGE QUANTITIES AND PRICE** 4 individually sealed patches: 5 µg/h transdermal patch £7.92, 10 µg/h transdermal patch £14.20, 15 µg/h transdermal patch £22.12, 20 µg/h transdermal patch £25.86. **Marketing Authorisation numbers** PL 40431/0024 – 0027. **MARKETING AUTHORISATION HOLDER** Qdem Pharmaceuticals Limited, Cambridge Science Park, Milton Road, Cambridge, CB4 0AB, United Kingdom. Tel: 01223 426929. For medical information enquiries, please contact medicalinformationukQdem@qdem.co.uk. **DATE EFFECTIVE:** February 2017. ® ***Butec*** and QDEM are registered trade marks. © 2013 Qdem Pharmaceuticals Limited.

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 Qdem Pharmaceuticals Limited on 01223 426929.

PI CODE: UK/QDEM-16010(6)
PI APPROVED: January 2017

www.qdem.co.uk

Qdem pharmaceuticals

BRAND QUALITY. GENERIC PRICES

Date of preparation: January 2018 UK/QDEM-16023a(2)