

Influenza vaccination programme 2024–2025: changes and challenges

What does artificial intelligence
mean for general practice nursing?

Brilliant basics of asthma education

Role of weight management in long-term conditions

Experiences of asylum seekers and refugees
accessing primary care

Understanding the role of exhaled nitric oxide (FeNO)

Managing childhood constipation in primary care

Can GPNs improve the experience of people
living with cancer?

Assessing children and young
people's mental health

Pernicious anaemia

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AI is coming to us all – so, let's embrace its potential



I've overheard several people say that was the fastest summer yet — I am not sure what makes a summer pass faster than most, but I do agree it passed at lightning speed. As I try and settle into a routine for the autumn, I find myself busy reviewing our long-term condition lists, planning quality improvement projects and mentoring the nurses who are newer to our team but developing fast. The opportunities in general practice nursing are widening all the time and it's a privilege to be supporting some nurses through their long-term condition modules and others to develop advanced practice skills, such as prescribing and clinical examination and assessment. Like the summer, everything seems to happen much faster these days. It is always stimulating to work with new nurses, it helps keep me up to date and to seek better ways of managing our increasingly busy GPN role.

This issue's 'Practice matters' piece looks at AI. It's coming to so many parts of our lives and it would be naïve to think it won't impact our work roles soon. I would welcome some AI led screening of all the results we get back — this may also lead to great uniformity between clinicians. I noticed in a meeting recently, we all have a different approach to abnormal liver function tests — yet there is evidence that how these are managed is vital for identifying chronic liver disease at an earlier stage (www.ncbi.nlm.nih.gov/pmc/articles/PMC11083526/).

I have also spent some time exploring more of the Wound Care Today website (a sister platform to this journal), including a video of Professor Paulo Alves explaining in practical terms how to assess and manage chronic wounds (www.woundcare-today.com/exufiber-the-impact-of-positive-change-in-clinical-practice-with-paulo-alves). In my clinical setting, I am now less involved in wound care as our treatment room nurses manage most of the day-to-day work in this area, but I am sometimes called down for a team approach to assess more difficult wounds and plan management and prescribing. This video helped me update past skills in this area and establish a wider, more practical approach to these often complex wounds, including dressing choice and dressing change frequency. This video is useful to all those working in general practice, and I intend to take the time to discover more resources like this within www.woundcare-today.com.

I was delighted to find an article on mental health in young people and how GPNs can help with this and very interested to update on FeNO testing and get some further tips around helping with weight management, a key factor in many long-term conditions. It was interesting also to understand more about asylum seekers' and refugees' experience of primary care. These are just some highlights in this issue — we would love to know what you find interesting, so please let us know what you would like to read, write or talk about so that we can continue to strengthen this community.

Jaqui Walker, editor-in-chief

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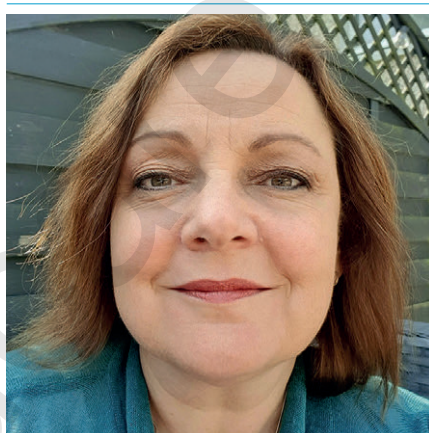
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My passion for education has given me such an amazing general practice nursing career. To be invited to become a member of the editorial team for the *Journal of General Practice Nursing* provides the opportunity to contribute to a journal with high standards and vision. Education is what drives good clinical practice; the characteristic adaptability and resilience demonstrated by staff is founded on sound principles. It is a privilege to be part of the editorial board, contributing to the strategic commitment of enabling access to educational material, which is contemporary, relevant and valued.

Julie Lennon



It is a privilege to be invited to join the editorial board. I have been nursing for 30 years and in general practice for over 16 years. The change in general practice is nothing short of amazing. I am currently working in a dual ANP/GPN role which I am passionate about and proud of the way we can make a difference to our patients' lives. My love of chronic disease management pushed me into finding a dual role where I can utilise all my skills, sometimes in every consultation. I am also a keen supporter of new GPNs embarking on their careers, and this journal is a fantastic tool to learning. I love reading the articles and look forward to recapping, updating and broadening my knowledge in other areas.

Susan Brown



I am delighted to have been invited to represent the *Journal of General Practice Nursing* editorial board. It is a privilege to review and contribute to

the work of our incredible colleagues and authors. As a primary care pharmacist, I work closely and collaboratively with experienced general practice nurses (GPNs) and understand and appreciate the dedication, compassion and diverse skill mix GPNs bring to the multidisciplinary team. In these uncertain times, when the challenges and pressures faced in primary care and the health service as a whole are unprecedented, it has never been more imperative for us to keep up to date with current best practice and to be proactive in developing interprofessional relationships to support the delivery of high-quality patient care. I feel the journal is an excellent resource to promote evidence-based, person-centred care across the multidisciplinary team, and I look forward to supporting the up and coming content.

Caroline McIntyre



I am thrilled to join the editorial board. I am passionate about improving quality of care across primary care. I enjoy acting as a change agent in general practice to improve patients' experiences and always strive to ensure that high quality, person-centred care is achieved. I am excited to be able to share ideas and discuss topics imperative to our role with like-minded healthcare professionals.

Cheryl Crawford

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What does artificial intelligence mean for general practice nursing?

Whenever scientists try and imagine what the future will look like, they invariably get a little carried away. If past predictions were anything to go by, by this point in the 21st century we should all be whizzing about in driverless cars, feasting on laboratory grown meat and living to improbable ages, our life expectancy artificially extended by stem-cell implants.

But even the most optimistic of scientists get it right sometimes. Thirty years ago, how we laughed when they said we'd all soon be reliant on shiny pocket-sized screens that contained pretty much anything of value in our lives. Or that cash would become obsolete, with all our purchases made with the simple tap of a plastic card (if you think I'm exaggerating, when was the last time you visited a 'cashpoint'?).

Despite the widespread adoption of smartphones and digital banking, there is one innovation that has slowly begun to exert more influence over our daily lives but which few of us understand, let alone know how to use — artificial intelligence, or AI.

Once the subject of hysterical stories about computers taking over the world and armies of sentient robots stealing our jobs, AI has crept into many areas of our lives from the music we listen to, to the face ID that opens our phones, and the digital voice assistants we use around the house.

But while AI is heralded as the future, many of us still don't really understand how it works, let alone what effect it might have on healthcare or the work of general practice nurses (GPNs).



Digital health and the use of AI is no doubt the future of nursing. In primary care we have seen the introduction of ongoing digital changes to enhance patient care and staff satisfaction. While change can sometimes be difficult to manage, using technology to lessen time constraints and enhance record keeping will only serve to improve patient care. However, as with all tech, faults can happen and appropriate safeguards and protocols need to be in place to ensure that safe and effective care is still delivered at times of malfunction. Additionally, tech and AI may be an aid to patient care, but should not replace clinical acumen and judgement — although can support GPNs in the modern world of healthcare delivery in an ever changing and complex environment.

Callum Metcalfe-O'Shea

UK professional lead for long-term conditions, Royal College of Nursing

WHAT IS ARTIFICIAL INTELLIGENCE?

The term AI was first coined in the late 1950s, and by the 1960s scientists were attempting to teach computers to essentially mimic human decision-making. Put simply, AI is the technology used to make a computer 'think' and 'react' in a human way, taking cues from its surroundings and 'deciding' how to react based on the information it has learnt ('What is AI? What does artificial intelligence do?' — www.bbc.co.uk).

Fast-forward to the 21st century, and AI is used in many areas that we take for granted or simply don't have the time to consider. For example, smartphones use AI to learn about our preferences and dislikes, and recently you may have noticed your phone or laptop providing you with handy ready-made replies to emails

or text messages ('Sounds great, I'll see you there!').

Online shopping sites use AI to track what products we might be likely to buy, and digital streaming companies use it to predict what films or music we want to watch or listen to. In travel, flight simulators use AI to train pilots, and farmers can use it to predict the weather.

AI has some slightly more sinister uses as well. Some supermarkets have begun using facial recognition tools powered by AI to extract biometric customer information from CCTV footage and compare it with profiles of known shoplifters ('A day in the life of AI' — www.theguardian.com).

In short, if you thought AI was something that you probably didn't have much to do with in your day-to-day life, think again (or ask Alexa to do it for you).

HOW IS AI USED IN HEALTHCARE?

One of the main benefits of AI is its ability to perform tasks usually considered to require human intelligence. In the realm of healthcare, this is most obvious in areas such as diagnostics, data interpretation and the design of algorithms that can sift through data to identify patterns in illnesses for example. There are two main types of AI:

- Generative AI, which is able to create new content such as pictures and music by 'learning' patterns
- Predictive AI, which is used to make estimations based on large amounts of data such as hospital records.

Therefore, much of the AI currently used in healthcare is predictive AI ('Artificial intelligence: 10 promising interventions for healthcare' — evidence.nihr.ac.uk).

Some specific uses of AI in healthcare include ('Artificial intelligence' — transform.england.nhs.uk):

- Analysing X-rays such as mammograms — traditionally every mammogram was double-checked for breast cancer by radiologists, a time-consuming process that resulted in delays for women. AI analysis means that each mammogram only needs to be checked by one radiologist, with a second called in only if the AI analysis and the first radiologist 'disagree'
- Developing algorithms from patient data — AI can develop algorithms by 'scanning' or 'reading' thousands of images taken from patients' records. For example, of rashes or moles, to identify conditions such as skin cancer. To protect the privacy of individuals, the AI algorithm does not need to 'know' details such as names or ages, but can work from images alone
- Reading and interpreting brain scans — AI imaging technology can assist clinicians to identify conditions such as acute stroke and Alzheimer's from scans,



Lovely article, highlighting the areas that we look forward to but are apprehensive about. We want technology to help us, to help our patients, and to make better diagnosis and inform better treatment. There is, however, a niggle that we might be replaced by artificial intelligence, it might deskill us and make wrong analyses — but, let's be positive. A paper in 2019 in the 'European Respiratory Journal' by Topalovic et al showed that AI outperformed pulmonologist specialists in interpretation of imaging tests and collating test results and clinical information into an accurate diagnosis. We should remember that this is not a competition and harness the power of technology (although it was interesting that clinicians in general hospitals were better than those in university hospitals, and younger [but trained] clinicians did better than older colleagues).

It is great to think about the future and AI. However, perhaps we should concentrate on funding the basics and getting the basics right. The last time I wrote in a patient's record was 1995 and I am aware that many of us are now paperless and using computer systems. But, we should perhaps address the issues of all patient records being IT based now, and that they interconnect so that colleagues in different environments can access information, tests and clinical details in real time, rather than waiting for often delayed correspondence still.

Steve Holmes

GP, The Park Medical Practice, Shepton Mallet, Somerset; associate postgraduate dean (Somerset), Health Education South West

Topalovic M, Das N, Burgel P-R, Daenen M, Derom E, Haenebalcke C, et al (2019) Artificial intelligence outperforms pulmonologists in the interpretation of pulmonary function tests. *Eur Respir J* 53(4): 1801660

as well as enabling doctors to instantly share the information between hospitals and speed-up treatment referrals.

AI IN NURSING

As well as being used in healthcare innovations generally, AI is also being used in nursing, and in some cases may benefit GPNs directly.

One example is the idea of 'virtual wards' where patients who might otherwise be in hospital are monitored and even treated remotely at home. In the case of patients with diabetes and hypertension, AI uses an app to turn their smartphone cameras into a diagnostic tool that scans and analyses a urine reagent strip (which is sent to the patient in the post),

then tests the albumin and creatinine levels to identify early-stage kidney disease ('Healthy.io: smartphone albuminuria urine self-testing' — transform.england.nhs.uk).

Another AI technology that might have significant implications for the work of GPNs is a new AI tool called 'C the Signs' which is able to scan medical records with the aim of more accurately spotting patients with cancer ('GPs use AI to boost cancer detection rates in England by 8%' — www.theguardian.com). Writing in *The Guardian*, James Tapper reports that the tool is able to compile details of patient's medical history, treatments and test results. It can then detect patterns that might indicate cancer and prompt practice staff to order tests or place patients

on a relevant care pathway. So far, the tool is being used in around 15% of practices in England.

Other AI-driven innovations that might change the practice of many GPNs in the future include documentation software that records and transcribes patient consultations (and filters out any background noise and small talk), then generates an electronic health record. The nurse simply has to approve the transcript and press 'Enter', thereby saving time and increasing patient throughput.

Similarly, GPNs' time management might be transformed by automated monitoring where AI algorithms check patient's vital signs remotely and alert nurses to any anomalies; or medicines management models that 'decide' which drugs will be most effective and assess possible adverse interactions ('What's the future of AI-assisted nursing?' — www.myamericannurse.com).

WHAT ARE THE DOWNSIDES?

Of course, not all of the implications of AI's use in healthcare are positive. For example, there are ethical dilemmas involved such as who or what is responsible if an AI-powered system makes a mistake or misdiagnosis?

Also, there are genuine concerns about job losses following the implementation of AI systems, with particular anxiety around AI's ability to accurately analyse images and scans, with roles such as radiography particularly vulnerable. However, some of these fears can be mitigated by the fact that if AI is used in the right way, it should complement rather than replace the work of humans and can actually free-up clinicians' time to focus on improving services ('What do technology and AI mean for the future of work in health care?' — www.health.org.uk).

It is also important to remember that healthcare and nursing, in particular, is a complicated process, which involves skills such as clinical judgement and critical thinking. Although AI may be useful for



Having worked closely with nurses in primary care for a number of years around digital, I often hear views that the variability and nature of the work of community is much less 'digitisable'. As a group, I've found that the experience of technology has been more problematic than other areas in care. I think the growth of AI will change both this perception and offer more positive experiences too.

Whereas in the past clunky systems created manual work, and workarounds, usually taking time away from the human side of things, the current wave of technology offers us new and interesting ways to understand, to interact, and to automate that we're seeing in other areas of society. It will no doubt challenge our norms — such as whether recording an entire care interaction is worthwhile if it automatically transcribes and codifies on behalf of the nurse. Or whether key information raised by the patient flags a clinical risk that the nurse can deal with or escalate in real time.

As health systems like the NHS continue to face demand, workforce and funding challenges, I think this will be both inevitable and bring positives and negatives. As a clinical community, I would encourage you to find ways to get involved and guide these developments on behalf of your profession and the needs of your service users, so AI becomes a change that happens through you, and not to you.

Liam Cahill
Founder, Sector 3 Digital

supporting nurses in areas such as diagnosis and data analysis, decisions about the actual care that people receive, as well as 'human factors' such as empathy and compassion will always remain the preserve of individual nurses ('Artificial intelligence' — transform.england.nhs.uk).

While none of us really know what the future will hold, one certainty is that AI is going to change healthcare and general practice nursing with it. Much like the impact of the internet and social media, AI will have benefits such as faster diagnosis, but also downsides such as a lack of 'human' qualities. Rather than replacing GPNs, if used in the right way AI should instead mean that we have more time to do what we do best — focus on the unique needs of our patients. They've yet to come up with an algorithm that can do that. **GPN**

RECOMMENDED READING

Health Foundation (2023) *What do technology and AI mean for the future of work in health care?* Available online: www.health.org.uk/publications/long-reads/what-do-technology-and-ai-mean-for-the-future-of-work-in-health-care

NHS England (2021) *Healthy.io: Smartphone albuminuria urine self-testing*. Available online: <https://transform.england.nhs.uk/ai-lab/explore-all-resources/understand-ai/healthyio-smartphone-albuminuria-urine-self-testing/>

NHS England (2023) *Artificial intelligence*. Available online: <https://transform.england.nhs.uk/information-governance/guidance/artificial-intelligence/>

National Institute for Health and Care Research (2023) *Artificial intelligence: 10 promising interventions for healthcare*. Available online: <https://evidence.nihr.ac.uk/collection/artificial-intelligence-10-promising-interventions-for-healthcare/>

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¹. Agren M (1990) Studies on Zinc in Wound Healing. Linköping University Medical Dissertations No. 320, Department of Pathology II, Faculty of Health Science. Linköping, Sweden.

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■ ■ ■ Making sure everyone can get the healthcare they deserve

How charities support the NHS to survive and thrive

At NHS Charities Together, we want everyone in the UK to experience the best healthcare possible.

Right now, the NHS is facing immense challenges. Pressures continue to grow, NHS resources are stretched, the aftermath of the Covid-19 pandemic is still starkly felt and budgets are squeezed so only the crucial elements of care are delivered. Patients' needs are changing — the population is growing and more people are living longer, often with more or multiple long-term conditions. We depend more on technology. Staff must be properly supported to provide a positive, personal experience to patients.

A new YouGov survey of 1,078 NHS staff commissioned by NHS Charities Together reveals the scale of NHS staff who feel that they are under growing pressure. A staggering 96% of staff who responded to the survey said they feel pressure is currently growing on NHS services and 95% feel the pressures on the NHS will continue for years even after the Covid-19 pandemic. Nearly three in four (74%) say the pressures feel as high as when Covid-19 cases were at their peak, and over four in five (83%) believe it will take many years for staff and volunteers to recover from the pandemic.

Charities exist across most parts of the public sector to add value to

stretched public services and the NHS is no different.

Working strategically with their trusts, our network of over 230 charities provide extra support and give an extra £1 million a day to the NHS. This help goes well beyond the 'trimmings' — from mental health support for an exhausted workforce to projects preventing ill health in the community, funding for research and innovations that enable health services to advance, or training and equipment for community first responder volunteers who are the first to arrive in an emergency. We continue as a sector to work together to have most impact, focusing on supporting workforce wellbeing, improving patient experience and outcomes, and helping people to live well in communities.

NHS Charities Together's Covid-19 Urgent Appeal launched on 23 March 2020, coinciding with the first lockdown being announced in the UK. Despite many of us feeling scared and anxious, it was heartening to see the nation get behind the NHS, with the appeal going on to raise £162 million. Although the immediate threat of the pandemic has receded, NHS staff are still facing immense pressure. Four years on, NHS Charities Together has funded thousands of projects across the UK, supporting urgent needs, community prevention projects and the longer-term recovery of the NHS, and supported over 600,000 patients and nearly one million healthcare staff across the UK. We have provided extra practical and emotional support for the workforce, funding for volunteers, improving health through green spaces, and tackling out-of-hospital cardiac arrest.

Initial evaluation of the first phase of the appeal shows:

- Nearly one million NHS staff have benefitted from vital extra support, including counselling and rest areas
- Approximately 600,000 patients have also been helped to access care or had support to reduce isolation
- Nearly £7 million has been invested in training and equipment for thousands of life-saving community first responder volunteers
- 4,241 individual projects funded through the first phase urgent and emergency grants programme
- Over 90% of projects from the first phase of the appeal have long-lasting impact.

The charity has also funded over 325 community organisations to tackle health inequalities and prevent ill health in the community, helping to reduce pressure on NHS services.

The pressure on the NHS is relentless and support from the public has never been more vital. NHS Charities Together will continue to help NHS charities go further, to increase their support for NHS staff, volunteers, patients, carers and families, so that everyone has access to the best health and care possible, no matter what.

Ensuring people receive the care and support they deserve in a time of immense challenge needs different sectors to work together. For the NHS to truly thrive, Government, local authorities and the voluntary sector must work together with the amazing network of NHS charities to drive change and ensure that our healthcare system is the best it can possibly be. **GPN**

To find out...

... more about NHS Charities Together, visit: <https://nhscharitiestogether.co.uk/about-us/who-we-are/>

Ellie Orton OBE, chief executive, NHS Charities Together





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 Vital learning for patients with asthma and their families/carers

Brilliant basics of asthma education

Here, Laura King, senior children and young people's asthma practitioner for North-East London, explores the core themes for good asthma education, often called the 'brilliant basics'. No matter how severe a patient's asthma is, this is key learning that patients and their families/carers need to understand if they are going to manage their asthma effectively.

Asthma is a common condition, affecting 10–11% of children and young people in the UK (Asthma+Lung UK, 2024c). It is also treatable with simple therapy most of the time (British Thoracic Society/Scottish Intercollegiate Guidelines Network [BTS/SIGN], 2019; Global Initiative for Asthma [GINA], 2022). It is still poorly understood in the UK despite guidance from the National Institute for Health and Care Excellence (NICE, 2021), BTS/SIGN and GINA — and this is still leading to preventable deaths (Royal College of Physicians [RCP], 2015).

As a clinician who runs a lot of teaching, which so often boils down to the basics — patient education — the author finds herself opening and closing with the same remark. If a patient or family does not understand a long-term condition, they are unlikely to manage it well. Collective complacency around its commonality and the long-term effects of poor control can mean that opportunities for education are missed. For some themes, the underlying issue can be understanding and for others the pertinent issue can be in the explanation, the narrative and even the wording of certain issues.

This article explores what are called the 'brilliant basics' (Asthma + Lung UK have used this term historically), the core themes that underpin effective asthma care:

- What is asthma?
- How and why does asthma therapy work?
- How to use devices
- How to spot and negate trigger factors
- How to use an asthma plan, and when to seek help?

“ If a patient or family does not understand a long-term condition, they are unlikely to manage it well.

WHAT IS ASTHMA?

Asthma has many definitions, but the one the author uses in training sessions goes thus:

What most families do not understand is that asthma is inflammation. If you ask a child or family what asthma is, largely they will answer mentioning wheeze, cough, attacks, tightness or blue inhalers.

Common misunderstandings include that asthma only affects children who are somehow weak or 'sick', that it is a response to cold weather or a viral illness, that children cannot have asthma under the age of five.

As an asthma specialist, the author finds that she spends most of the first appointment for the majority of patients returning to explaining that asthma is inflammation. The 'penny drop' moment often comes at this point, when the family suddenly understand why the steroid inhalers work, why their child is sensitive to various triggers, and why they cough or wheeze.

HOW AND WHY DOES ASTHMA THERAPY WORK?

Once what asthma is has been established, it is far easier to

understand how and why medications work.

Common misunderstandings include that the reliever is the only inhaler that works (purely because the biofeedback is immediate or rapid), while the preventer inhaler or medication tends to be a longer-term building of effectiveness. They may not feel 'better' for some time, or in a gradual way.

It is important to start by explaining where asthma is, i.e. in the lungs, the smaller airways. The author often starts by asking families what they think asthma is, notes the child/young person's age, and asks what they know about the lungs.

It is important to explain that asthma is inflammation (explain in terms of red/sore/swollen, meaning sensitive/twitchy/squeazy) — this is what asthma is, and this can be helped by preventer medicines that are usually small doses of steroids in inhalers.

The 'Young Barts Patient Information Booklet' has some information in an easy-to-read format, and explains the medications and their relative benefits (<https://primarycare.northeastlondon.icb.nhs.uk/home/asthma/asthma-wheeze-nel-booklet-all-languages/>).

It is also important to explain that the preventer (or controller) is usually a steroid medication, in very tiny doses, that works where it is needed. It works on the lining of the airway (breathing tube) to settle down the inflammation. The author finds that by explaining that asthma is a little like eczema can help the patient to visualise the inflammation — red,

sore, sensitive — and that the inhaled steroid works similarly to a steroid cream in that it:

- Works in a targeted way, where it is needed (topically/inhaled)
- Is a very small dosage compared to oral steroids
- Needs to be taken in the right way to work well
- Takes weeks to hit therapeutic levels and for the patient to notice the benefit.

It is vital to note that the reliever does not do this job, does not help the underlying issue (it actually worsens inflammation if over-used), because it does not work in the same way (Asthma + Lung UK, 2024a; Barts Health NHS Trust, 2024). It can be helpful to use a visual description again, such as describing muscles wrapped around the airways (breathing tubes), which are a little like elastic bands and are usually relaxed. When triggered, these muscles tighten and squeeze the airway (breathing tube). Ask the child/carer to imagine a tube that is being squeezed from the outside, and imagine what it does to the inside — air will squeeze through which makes the wheezing sound. The reliever inhaler tells these muscles to relax, opening the tubes once again and relieving the tightness.

HOW DO WE USE DEVICES WELL?

The natural next question to 'are they taking it?' is 'how are they taking it?'.

Excellent adherence (while commendable) can mean nothing in asthma if device technique is poor. In the author's clinical experience, across the spheres from primary to tertiary care, the commonest issue following poor adherence is using a pressurised metered-dose inhaler (pMDI) without a spacer.

Common issues with a mask spacer include:

- Fit
- Seal
- Thrashing.

Common issues with a mouthpiece spacer are:

- Using before ready



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- Rapid breathing
- Not enough breaths
- Poor seal — smaller children blowing like a trumpet.

Common issues with a breath-actuated or dry powdered inhaler (DPI) include:

- Poor inspiratory drive/effort
- Poor understanding of how to prime/poor fine motor skills (Gillette et al, 2016; Asthma + Lung UK, 2024b; Primary Care Respiratory Society [PCRS], 2024).

Spacers/inhalers — minimising fear and making it fun!

Many younger children, especially toddlers, can be frightened of the inhaler and spacer. This is often because they have only experienced it in times of acute illness, when they are struggling to breathe, frightened, and their parent/carer is also stressed. They may also have been given a nebuliser, which is similar in terms of sensation (feeling smothered), but with the additional noise and mist. When it comes to administering inhalers at home, some children will become visibly distressed and actively fight the parent or carer. Small children can be deceptively strong and do not have the understanding to allow reasoning, so this can be a fairly traumatic experience for both parent and child.

In the author's experience (guided by years as an emergency department nurse, but also time spent with play therapists since specialising), the

following activities have been the most useful:

- Allow the child to play with the spacer, decorate it with stickers to make it less threatening
- Role play the situation (especially if the child has been acutely unwell/exacerbated) with the child's toy, putting them in control. Encourage them to help the toy to calm, to take gentle breaths and to feel better. Top tip from play teams — do not use the child's 'lovey' or precious toy for this
- Use matter-of-fact, neutral language, 'OK, so it's time to do our medicine', rather than giving the child the illusion of choice when it is actually not a possibility
- Explain to the child (however young) what it is for, that it will help their body to stay well and feel better
- Name the feeling if the child is feeling frightened, calmly, reassuring and reaffirming that it will be finished soon. Do not lie about it being the last time/last dose if it is not the case
- Count the child's favourite toys, characters, colours or just count
- Often small children will try and blow the spacer like a trumpet — ask them to open their mouth and use their dinosaur/shark teeth to bite down.

HOW TO SPOT AND NEGATE TRIGGER FACTORS

Knowledge of triggering factors is key to good asthma control. If the child

and their carers understand what exacerbates their asthma, they can make steps to negate or avoid the triggers.

In the author's clinical experience, it is not always straightforward to unpick triggering factors if the family are unsure or history is unclear. It can often feel like a guessing game — we find ourselves asking a series of questions, playing amateur detective until we hit a pattern. Consider, is the trigger apparently:

➤ Signposting...

- Asthma + Lung UK — good for easy-read PAAPs, peak flow diaries, inhaler technique videos and general advice for children and young people: www.asthmaandlung.org.uk/
- Beat Asthma — has its own course: www.beatasthma.co.uk/courses/
- Moving On Asthma — a newer, but excellent website created by an experienced nurse specialist. It has posters and other resources for families living with asthma, and their clinicians: <https://movingonasthma.org.uk/>
- Itchy, Sneezy, Wheezy — information on atopic conditions, including an excellent video demonstrating nasal spray technique: www.itchysneezywheezy.co.uk/
- Clean Air Hub — information on air pollution, inside and outside, with top tips for avoiding/minimising: www.cleanairhub.org.uk/home
- Digital Health Passport — an app with a wealth of educational videos on asthma and allergy, a pollen/air pollution alert system, peak flow and symptom monitoring and the ability to upload/photograph your PAAP: <https://digitalhealthpassport>
- Spanish — Iggy & The Inhalers (US resource so some wording different): <https://iggyandtheinhalers.com/pages/spanish>

- Seasonal or perennial? Pollens, spores, weather, environmental changes
- Frequency — daily, weekly, monthly, sporadically or apparently random?
- Allergies (common — house dust mite, pollens, animals), hormones, strong emotions, environment related to daily routine, stress/anxiety
- Related to an activity or location? Animals, dust, cigarette smoke, pollution, emotions.

Common triggers can be categorised as below, including (but not limited to — triggers can be as individual as the patient themselves):

- Environmental:
 - Weather — heat (dry/humid), cold (dry/damp), or changing
 - Temperature — heat or cold, or the changes between
 - Thunderstorms — changes in atmospheric pressure, the weather/temperature itself, pollen particles broken down and entering smaller airways
 - Air quality — outside (fumes from road traffic, industrial activity), cigarette smoke, pollens
 - Air quality — inside (damp, mould, spores, cigarette smoke, cooking and cleaning, poor ventilation), fragrances — room fragrances, such as diffusers, candles, plug-ins/perfume, aftershave, deodorant
- Animal:
 - Pet dander
 - Activity-related/location-related — horses, feathers, animal products in hobbies
- Allergies:
 - Known/unknown
 - Foods (this increases a patient's risk profile significantly)
 - Pollens — tree or grass
- Emotional:
 - Strong feelings — anger/excitement/worry/stress
 - Associations with anxiety, e.g. arriving at school gate
- Hormonal:
 - Puberty
 - Menstrual cycle – asthma exacerbations linked to week one of cycle.

It is also important to clarify exercise as a trigger factor, whether this is just being active (e.g. running for a bus, walking fast, stairs), or more intensive activity. It may be specific to the activity (e.g. swimming, running, football).

The most common trigger factor, colds and viral illness, will also trigger some response for almost everyone, whether they have mild or severe asthma (Asthma + Lung UK, 2024c). If they are well controlled, they may not require any rescue medication at all.

ASTHMA PLANS

Holding a personalised asthma action plan (or PAAP) reduces a patient's likelihood of exacerbating threefold (Asthma + Lung UK, 2023). An asthma plan tells a patient/carer what to do to stay well, when they have symptoms, when they feel their asthma symptoms are worsening, and when they are acutely unwell. It highlights action at each point.

- **Green:** even when I am well, I am taking my preventer
- **Amber** — two puffs salbutamol/one dose maintenance and reliever therapy (MART) is not helping/lasting — give medium dose (four to six puffs) and seek medical attention. My asthma is not well controlled, I may be having an exacerbation or I may be having worsening symptoms
- **Red** is an emergency. Give 10 puffs salbutamol, call 999.

Most PAAPs utilise a traffic light model as it is well understood by patients and families, especially where health literacy is low. In the author's network, one of the most richly diverse but incredibly deprived, both health and English language literacy are often a barrier to understanding.

There are also useful digital tools, such as apps which can hold an asthma plan or monitor peak flow and/or symptoms, e.g. digital health passports (Tiny Medical, 2023).

(See *Signposting* box for more useful resources.)

WHERE TO FIND GOOD QUALITY INFORMATION ABOUT ASTHMA

In the author's clinical opinion, there is a great deal of misinformation about asthma, so it is important to signpost patients to good quality information.

A few common myths from the author's experience:

- You cannot diagnose asthma in under five year olds
- Everyone will grow out of asthma by the age of seven
- There is an age at which you do not need a spacer with a pMDI
- Asthma triggers stay the same
- Inhaled steroids are addictive or the child will become dependent on them, or that they weaken the lungs
- Inhaled steroids will cause behaviour change and/or stunted growth even at a low dose
- Asthma is not dangerous and children can 'fight it'.

In this age of limitless information at a child/young person's fingertips, it can be difficult for them to know which information is reliable and which is not. Similarly for parents, online forums and groups can offer well-meaning but unwise or even dangerous information. During the first wave of coronavirus, there were several concerning posts doing the rounds encouraging parents to request rescue packs of oral steroid 'just in case' and to purchase saturation monitors and home nebulisers — all of which are actively discouraged as they are implicated in many asthma deaths in the UK (RCP, 2014). **GPN**

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Box 1 Top tips

Here are some top tips from the author's experience working with primary care and from discussion during training:

- Ask the patient/family what they understand first and do not make any assumptions. This helps to gauge where to begin
- Do not assume that a young person understands just because they are seen frequently and/or have a long-standing diagnosis
- Use words that are meaningful and do not forget that for some people, especially if English is an additional language, even words like airway, lung or inflammation may require explanation. Some will understand simple and more complex medical terms like inflammation, but most will not unless you explain first
- Use visuals to build a sense of the narrative. The author personally likes to use eczema as an example of inflammation, small dose steroids working topically and the narrative of perfumes triggering skin. She also has a stash of visual resources to really hone down the explanation and show where the treatments work
- Check how it is going — every now and then pause to check understanding and ensure that you are actively listening to the patient and/or family.

www.asthmaandlung.org.uk/conditions/asthma/treatments/mistakes#:~:text=Ten%20common%20mistakes%20with%20inhaler%20technique%201%201.,having%20a%20tight%20lip%20seal%20...%20More%20items

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USEFUL RESOURCES

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How GPNs, through the art of language and empathy, can support patients make healthy lifestyle changes

Role of weight management in long-term conditions

In the second part of our **Monitoring matters** series, Callum Metcalfe-O'Shea, advanced nurse practitioner and UK professional lead for long-term conditions with the Royal College of Nursing (RCN), discusses the role of weight management in relation to long-term conditions. For the purpose of this article, again the term long-term conditions will cover type 2 diabetes, asthma, chronic obstructive pulmonary disease (COPD), autoimmune rheumatic diseases and inflammatory bowel disease (Crohn's/colitis). With advances and changes in how weight is addressed in general practice, this article highlights key issues faced and helps general practice nurses (GPNs) to recognise the value they play in supporting patients in their healthcare journey. Treatment options are also considered when appropriate in condition-related areas only.

Weight management has become a topic of interest in contemporary practice, as many pressures, social and environmental, impact on patients' health and ability to control optimum and healthy lifestyles (Hazelhurst et al, 2020). The subject of weight management can often be tricky, with evidence highlighting that nurses lack confidence in broaching such conversations and the tension this can cause in a practice setting (Hazelhurst et al, 2020). It is important that these conversations are not always steered towards obesity, but also include low body weight (Cardel et al, 2022).

The NHS (2023) recognises the term body mass index (BMI) and its application to practice as:

BMI is a measure of whether you're a healthy weight for your height. You can use the NHS BMI healthy weight calculator to find out your BMI.

For most adults, if your BMI is:

- Below 18.5 — you're in the underweight range
- 18.5 to 24.9 — you're in the healthy weight range
- 25 to 29.9 — you're in the overweight range
- 30 to 39.9 — you're in the obese range
- 40 or above — you're in the severely obese range.

If you have an Asian, Chinese, Middle Eastern, Black African or African-Caribbean family background, you'll need to use a lower BMI score to measure overweight and obesity:

- 23 to 27.4 — you're in the overweight range

- 27.5 or above — you're in the obese range.

However, it is important to recognise that muscle mass is not taken into account, which can impact on the results (NHS, 2023).

Weight management, particularly obesity, has a strong link to the development of different long-term conditions, including type 2 diabetes, non-alcoholic fatty liver disease, chronic kidney disease and cardiovascular disease (Lin and Li, 2021). As said, the focus should not just be on patients being overweight, as being underweight is commonly overlooked in terms of causality for ill health and any associated conditions (Golubnitschaja et al, 2021).

Statistics from 2016 indicate that globally 75 million females and 117 million males were recorded as being underweight (Golubnitschaja et al, 2021). Complications associated with being malnourished include an increased risk of cancer, infection and cardiovascular abnormalities, as well as reproductive health complications (Golubnitschaja et al, 2021). Thus, it is vital that general practice nurses (GPNs) consider both being overweight and underweight when reviewing patients with long-term conditions in order to provide optimal support to improve health outcomes (Hazelhurst et al, 2021).

A link between weight and long-term condition development and

management is evident (Lin and Li, 2021). The therapeutic relationships developed between patients and GPNs means that the latter are in a strong position to influence health changes and positive outcomes (Coutts, 2021). Indeed, applying knowledge and understanding to long-term condition management is crucial for reducing complications and improving patient biopsychosocial wellbeing (Coutts, 2021).

DISCUSSING WEIGHT MANAGEMENT WITH PATIENTS

Due to the strength in therapeutic relationships built with patients, nurses are often well placed to deliver health education, including advice on reducing alcohol, stopping smoking, maintaining a healthy weight and leading a healthy lifestyle (Leong et al, 2021). While the topic of weight management can be challenging to address, the familiarity and trust patients have with GPNs underscores the important role that they play in weight management and long-term conditions (Coutts, 2021).

Tremblett et al (2022) state that barriers towards these conversations include:

- Worry about causing offence
- Time pressures in practice
- Lack of training on the subject
- A belief that many interventions are not effective.

They go further to identify that patients actually often welcome

opportunities to discuss weight and prefer more individualised management techniques rather than generic information (Tremblett et al, 2022).

Another issue is the availability of services to support patients with weight management, mainly for those who are overweight (Oviva, 2023). For those who are overweight, referral usually is across tiers with digital programmes available, such as the digital weight management programme for those who are at risk of diabetes, have type 2 diabetes, or high blood pressure (NHS, 2023). However, tier 3 weight management services (counselling, physiotherapy and information from dieticians) vary nationally due to contract provider and funding (apart from that of digital weight management programmes), and can be challenged by contracts, finances and lack of staff/services for appropriate patient intervention (Oviva, 2023). This often means that patients have to wait before entering a tier 3 service for advice and support and so may gain more weight during this time (Oviva, 2023). For those with long-term conditions, this can affect their health with deterioration of other comorbidities (Gericke et al, 2023).

For those who are underweight, referral to a dietician and other local resources again depends on availability (Department of Health and Social Care, 2023). All these factors are compounded by patient engagement, understanding and motivation to be involved with the services and make changes (Gericke et al, 2023). It is no surprise that many nurses feel challenged by approaching conversations around weight and how to provide support, given the issues around services available (Coutts, 2021).

Despite these challenges, opportunities exist for conversations to instigate motivation and awareness around the risks of being over- or underweight, particularly for those with long-term conditions (Obesity UK, 2024). Some factors to consider when initiating conversations are:

- **Awareness:** try to shift from explaining the risks but rather ask the patient what they understand

about the long-term problems associated with being over- or underweight — ‘what do you know about weight and blood pressure?’

- **Blame and shame:** avoid words that may ‘blame and shame’ a patient. Be more open and understand their unique situation which may have contributed to weight problems
- **Labelling:** avoid using the word ‘obesity’ ‘anorexia’ and stigma associated with both, recognise the patient as a ‘person living with increased or low weight’ to support motivation and understanding
- **Avoid assumptions:** move away from assumptions as to why weight may not be managed and consider what interventions have already taken place to help, i.e. taking up exercise, socialising, etc
- **Focus on positives:** understand the positive changes that can or may already have been made to support motivation and encouragement

(Lavin et al, 2015).

These considerations can help GPNs have empathetic and meaningful discussions to ensure that patients feel motivated and engaged in their healthcare (Lavin et al, 2015). It is also important to know what support services are available locally. Questions GPNs can ask within their practice to facilitate this include (Lavin et al, 2015):

- Are there local community-based weight management services?
- Are there local activity classes suitable for patients with a high or low BMI?
- Is it possible to refer directly to a local dietetic service?
- Are there recommended websites or support services?

The need for delicate, empathetic and empowering conversations with patients who are under- or overweight is crucial to prompt change, as often they feel a mixture of emotions when discussing individual concerns, namely (Obesity UK, 2024):

- Low self-esteem
- Weight-related stigma
- Victimisation
- Depression
- Anxiety
- Discrimination.

DIABETES AND WEIGHT MANAGEMENT

It is no secret that being overweight increases the risk of type 2 diabetes, and while being underweight is rare, a normal BMI does not mean you cannot develop type 2 diabetes (National Institute for Health and Care Excellence [NICE], 2022). It should be noted that if a patient presents as underweight with symptoms of diabetes, including tiredness, excessive thirst, excessive urination and ketones in their urine, this could be a new type 1 diagnosis and immediate review is required (NICE, 2022).

The link between obesity and type 2 diabetes in particular is due to the biological outcomes of hyperglycaemia resulting from declined insulin sensitivity owing to the reduction in beta cells in the pancreas (Ruse et al, 2023). The increase in adipose tissue elevates the levels of certain metabolites if deposited in the wrong places, fuelling systematic inflammation and impairing cellular function, including that of beta cells (Ruse et al, 2023). These factors increase the onset of hyperglycaemia and ultimately type 2 diabetes.

However, having a normal BMI does not preclude development of type 2 diabetes (Salvatore et al, 2023). Genetic predisposition, particularly among the Asian and Afro-Caribbean population, increases the likelihood of non-obese related diabetes (Salvatore et al, 2023). This is mainly attributed to genetic susceptibility in beta cell dysfunction, changes in pancreatic islets due to early life protein restrictions, and possible islet cell antibody productions (Salvatore et al, 2023). Thus, it is important that GPNs continue to promote screening for all patients to ensure that appropriate prevention measures can be put in place (Salvatore et al, 2023).

There are newer pharmacological agents available that can support weight loss and type 2 diabetes, including sodium-dependent glucose cotransporter protein inhibitors (SGLT-2i), and glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic polypeptide



Practice points

How do you approach patients with diabetes in terms of weight management? Can you consider any pharmacological agents to support weight loss when required?

(GIP) medications (Lazzaroni et al, 2021). SGLT-2i work by regulating renal glucose absorption in inhibiting the co-transporter proteins, leading to increased glucose excretion in the urine (Lazzaroni et al, 2021). This essentially means that calories are also excreted, thus promoting weight loss (Lazzaroni et al, 2021). GLP-1 and GIP on the other hand are naturally released by the gut during meals; maintaining blood glucose levels by stimulating glucose-dependent insulin secretion, thereby driving insulin-mediated glucose disposal to the muscle and fat cell (Lazzaroni et al, 2021). These medications work by increasing the sense of satiety, thus reducing calorie intake and promoting weight loss (Lazzaroni et al, 2021). These pharmacological agents could be considered, as per NICE (2022) guidance, to support weight loss when required.

WEIGHT MANAGEMENT AND COPD/ASTHMA

Evidence suggests a link between being under- or overweight and how this can impact on development and management of respiratory conditions such as COPD and asthma (Putcha et al, 2018). Obesity particularly impacts on the increase of dyspnoea (shortness of breath), poorer quality of life, and increased use of reliever inhaled therapy due to the extra body mass the patient carries (Putcha et al, 2018).

COPD is a progressive respiratory condition characterised by persistent airflow limitation. It often leads to a series of complications that can significantly affect the patient's nutritional status and general health. For example, increased dyspnoea, hypoxia (low oxygen levels), and inflammation raise energy expenditure, decrease energy intake, and lead to nutritional depletion

and weight loss (Putcha et al, 2018). Patients with COPD who are underweight are also at increased risk of cardiovascular disease, exacerbation rates, and it contributes to early mortality (Putcha et al, 2018).

Being underweight with asthma also results in dyspnoea associated with activity, which impacts on reliever therapy use (Putcha et al, 2018). Obesity, on the other hand, results in increased secretion of key cytokines that promote inflammation, thus increasing exacerbation risk (Sharma and Cowan, 2021).

This evidence highlights the importance of weight management discussions during respiratory reviews to promote optimal health outcomes.

WEIGHT MANAGEMENT AND RHEUMATIC CONDITIONS

This section considers patients with autoimmune rheumatic diseases, such as systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), and psoriatic arthritis/psoriasis (PsA), who exhibit prominent immune system dysfunction (Taylor et al, 2019). With obesity, it is important to consider the link with inflammation caused by the release of key cytokines from adipose tissue. This inflammation leads to elevated levels of C-reactive protein (CRP; inflammatory marker) in the blood (Taylor et al, 2019). Additionally, these pro-inflammatory cytokines released from visceral adipose tissue in obesity contribute to chronic inflammation, which can exacerbate autoimmune rheumatic diseases (Espinoza et al, 2021).

While it is acknowledged that weight gain can occur in patients with rheumatic disease due to multifactorial and complex factors, including dietary changes, corticosteroid treatment, and reduced physical activity, rheumatoid cachexia can also occur resulting in weight loss and muscle wasting (Santo et al, 2018). Cachexia is characterised by increased energy expenditure at rest and loss of lean muscle mass due to the high degree of inflammation experienced (Espinoza et al, 2021). Rheumatoid cachexia can be linked to an increase in tumour necrosis factor, and ultimately

increases risk of early morbidity and mortality (Santo et al, 2018).

Additionally, use of steroids within this patient population can increase the risk of obesity and type 2 diabetes — a known risk factor impacting on other long-term conditions such as hypertension development (Taylor et al, 2019).

In essence, those with autoimmune rheumatic diseases may struggle with weight changes due to the combination of inflammatory cycles that impact on condition management (Espinoza et al, 2021). Therefore, it is essential that GPNs have appropriate discussions and offer support to help manage the condition (Coutts, 2021).

WEIGHT MANAGEMENT AND INFLAMMATORY BOWEL DISEASE (CROHN'S/COLITIS)

With regards to weight and inflammatory bowel disease (IBD), evidence indicates that approximately 20–40% of all patients with IBD are reported overweight, which impacts on condition management (Kim et al, 2023). Indeed, corticosteroid treatment used for IBD can increase the incidence of obesity in this patient cohort (Kim et al, 2023). It should be noted that obesity can increase the risk of relapse and complicate treatment — again, this is mainly due to the release of inflammatory cytokines that affect the intestinal barrier function (Kim et al, 2023). These pro-inflammatory cytokines can also increase intestinal permeability, raising the risk of bacterial transmission and subsequent infections (Kim et al, 2023).

Low body weight, however, can also contribute to worsening symptoms for patients with IBD, as being underweight increases the risk



Practice points

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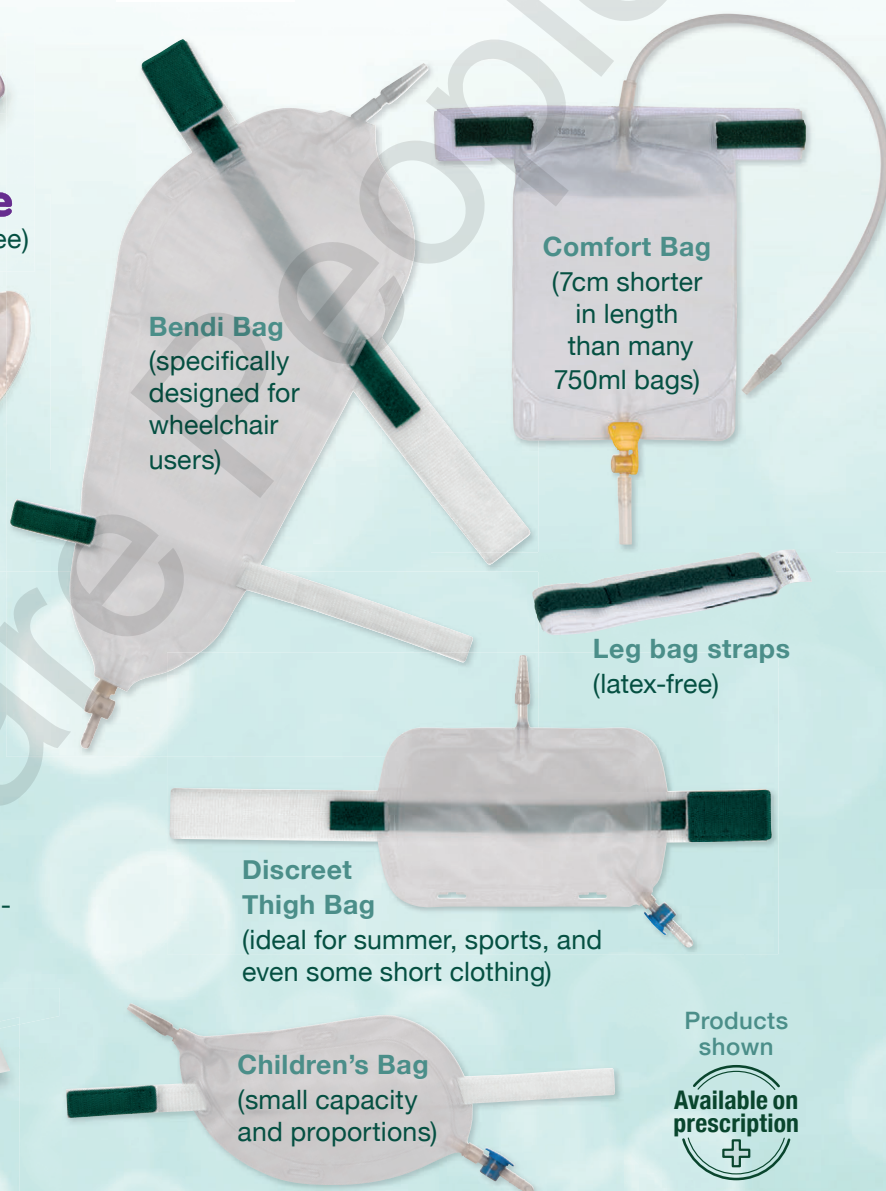
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Practice points

How aware are you of the impact of weight on autoimmune rheumatic diseases? Create a checklist to consider when reviewing these patients.

of nutritional deficiencies exacerbated by IBD (Bhagavathula et al, 2021). This can affect micronutrient absorption, such as iron, calcium and zinc, as well as vitamins A, K and B12 (Bhagavathula et al, 2021). Being deficient in these before a diagnosis has also been linked to increased risk of developing IBD (Bhagavathula et al, 2021).

Again for GPNs, the common concern is the use of steroids in this patient group, as this can contribute to weight gain and ultimately development of other long-term conditions (Burisch, 2023). Thus, GPNs need to be aware of the impact of weight gain on IBD, so that they can provide opportune advice and support to prevent symptoms worsening.

CONCLUSION

Weight management is a vital part of managing long-term conditions and GPNs play a crucial role in supporting patients. While not all treatment options have been covered, the art of discussion and empowering patients to engage in their own healthcare will improve long-term condition management, leading to better outcomes. GPNs are trusted professionals for patients living with long-term conditions, and through their strong relationships can begin conversations around weight management and provide education, behavioural support and signposting where required. **GPN**

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Influenza vaccination programme 2024–2025: changes and challenges

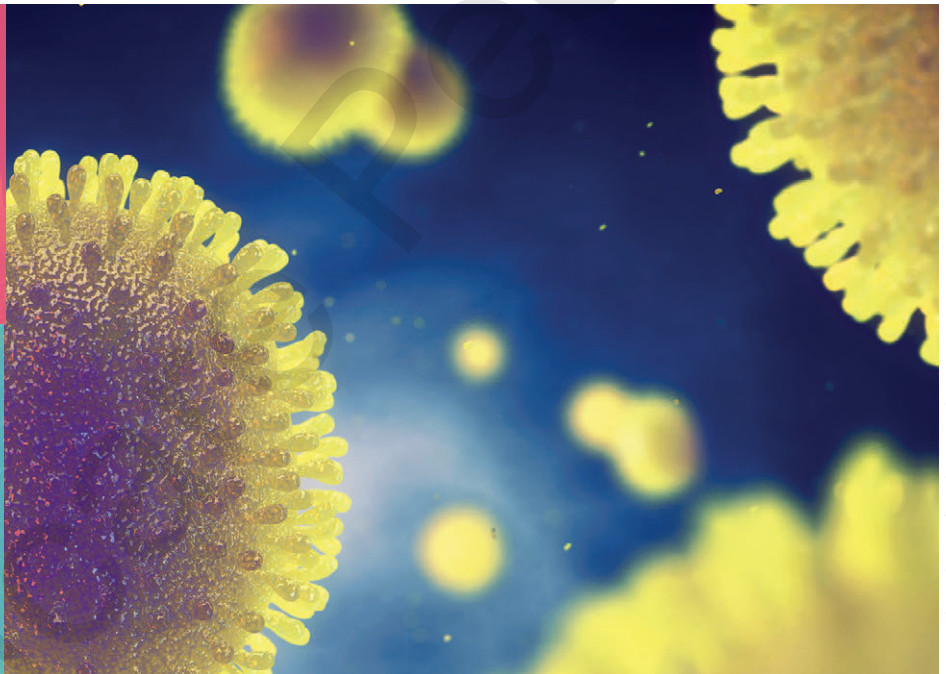
The national influenza vaccination programme of the United Kingdom is highly successful, changeable and progressive and can feel relentless in its delivery. When the national flu immunisation programme plan for 2024 to 2025 (as known as 'the annual letter') was published on 12th March 2024, initially it seemed that this year would have very few changes to the programme, when compared to those of the last few years (UK Health Security Agency [UKHSA], 2024). However, since then there have been two versions of a statement of amendment, the second due to loss of a valuable vaccine type (UKHSA, 2024), and a pertinent letter from NHS England concerning the start dates for the programme (NHS England, 2024). These changes should not be a surprise to any immuniser, especially those who have been involved in the flu vaccination programmes in previous years. Changes often happen in the lead up to, and even after, the start of the programme. Our national immunisation programmes (NIPs) are never static for long. They are changeable due to such things as changing epidemiology, differing vaccine types or supply, new evidence, national advice or recommendations being implemented and shared with the field regularly.

KEY WORDS:

- Influenza
- Vaccines
- Immunisation
- Eligible cohorts
- Future
- General practice nurses

Pauline MacDonald

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INFLUENZA DISEASE

The SARS-CoV-2 virus, and the subsequently named Covid-19 pandemic disrupted not only our lives and the lives of everyone around the world, but also had a marked impact on the epidemiology of many transmissible infectious diseases, especially those spread via the respiratory route or through direct contact with contaminated surfaces, like influenza virus (UK Health Security Agency [UKHSA], 2024a).

For two winter seasons, 2020–21 and 2021–22, the UK experienced very low influenza incidence due to the measures in place to control the

“ ... even in a ‘lower influenza activity’ season the most vulnerable in our population still suffer from severe influenza disease and the poorest outcomes.

Covid-19 pandemic (UKHSA, 2024a). In the winter of 2022–23, with the relaxation of non-pharmaceutical control measures, which were in place for Covid, influenza returned at higher levels than the previous two years. It was estimated that a total of 8,751 hospitalisations for confirmed

influenza occurred in 2022–23, compared to just over 1,000 in the season 2021–22 (UKHSA, 2024a).

Last year, 2023–24 season, influenza activity was described as lower than 2022–23 season, however hospitalised confirmed influenza cases still numbered 8,026 (UKHSA, 2024b). The highest recent season for excess mortality associated with influenza was 2014–15, when just under 30,000 deaths from influenza were estimated (UKHSA, 2024a).

All this serves to illustrate how variable influenza activity and impact is, and that even in a ‘lower influenza activity’ season the most vulnerable in

our population still suffer from severe influenza disease and the poorest outcomes.

INFLUENZA VACCINATION PROGRAMME

The influenza vaccination programme comes around so fast each year. No sooner has one season finished than plans for the next are announced. Considerable and relentless efforts are made by primary care providers and school age immunisation teams to offer immunisation to all vulnerable, and therefore eligible, groups before the rates of influenza infection in our communities climb. In the 2023–24 season, approximately 16 million eligible people received a flu vaccine (UKHSA, 2024b), demonstrating the extent of the challenge of this programme. Without such large numbers of our eligible, and most vulnerable, population receiving a flu vaccine, the cases of severe disease, hospitalisation and death from influenza would certainly be very much higher each season.

Like all vaccines, influenza vaccines might not prevent less severe infection, but they do reduce the recipients' risk of severe disease, hospitalisation and death from influenza (UKHSA, 2023). It is important that immunisers remember these benefits when offering a flu vaccine to eligible patients. Some recipients might be reticent to accept the offer or might even query what the point of having their flu vaccine is, since they still had influenza after it. The point is, that without vaccination, the outcomes from influenza infection may be very much worse. Additionally, with the ongoing presence of Covid-19 virus in the UK (UKHSA, 2024c), it is worth noting that there is some evidence that having had an influenza vaccine may also protect the recipient against severe Covid-19 outcomes, compared to individuals who have not had a flu vaccine (Wilcox et al, 2021). This is another key point to highlight to those especially vulnerable to poor outcomes from both flu and Covid-19 infection, such as the elderly and immunocompromised.

ELIGIBLE COHORTS AND TIMING OF VACCINE OFFER

This season, 2024–25, the groups eligible for a flu vaccine are unchanged compared to the previous year. What has changed though is the timing of when vaccination will be offered to different eligible groups.

The annual plan (UKHSA, 2024) stated the following:
The following groups are to be offered flu vaccination in line with the announced and authorised cohorts (see timings section):

- *From 1 September 2024:*
 - *pregnant women*
 - *all children aged two or three years on 31 August 2024*
 - *primary school-aged children (from reception to year 6)*
 - *secondary school-aged children (from year 7 to year 11)*
 - *all children in clinical risk groups aged from six months to less than 18 years*
- *From October 2024, exact start date to be confirmed by NHS England in due course (See note below):*
 - *those aged 65 years and over*
 - *those aged 18 years to under 65 years in clinical risk groups (as defined by the 'Green Book', influenza chapter)*
 - *those in long-stay residential care homes*
 - *carers in receipt of carer's allowance, or those who are the main carer of an elderly or disabled person*
 - *close contacts of immuno-compromised individuals*
 - *frontline workers in a social care setting without an employer-led occupational health scheme, including those working for a registered residential care or nursing home, registered domiciliary care providers, voluntary managed hospice providers, and those that are employed by those who receive direct payments (personal budgets) or personal health budgets, such as personal assistants.*

More detailed definitions of the eligible cohorts can be seen in the *Green Book* influenza chapter dated November 2023 (UKHSA, 2023).

Practice point

The exact start date for eligible adults being offered a flu vaccine has now been confirmed by NHS England as 3rd October 2024 (NHS England, 2024).

Occupational health flu vaccination provision for healthcare workers and social workers should also be offered from 3rd October 2024 (NHS England, 2024).

This chapter is likely to be updated for the 2024–25 season, so general practice nurses (GPNs) and all immunisers should be alert to its publication.

There is an expectation that the majority of flu vaccinations will be completed by end of November 2024 (UKHSA, 2024). This shorter 'window' of opportunity to offer and administer vaccines to the eligible adult population will obviously increase pressure on immunisation providers, particularly general practice. At provider level, careful planning and implementation will be vital if this is to be achieved. NHS England considered that a later start to the programme was feasible in terms of delivery, and noted the requirement for good planning, communication and management of public expectations (Joint Committee on Vaccination and Immunisation [JCVI], 2023). At time of writing, public messages regarding this later start to the programme have not been seen.

The rationale for this later start to vaccination of adults is laid out in advice from the JCVI (2023). It has been noted across a number of studies, and years, that influenza vaccine effectiveness (VE) against some strains of influenza virus and in some recipients, can wane by up to 30% in the latter period post vaccine (91–180 days) when compared to the period 15–90 days post vaccine (Young et al, 2018). That study and other evidence presented to JCVI at their October 2023 meeting resulted in their advice to move the start of the flu vaccination

programme for older adults and adult risk groups to the beginning of October (JCVI, 2023).

The children's vaccination programme remained as a September start, or as soon as vaccine supply allowed. This decision was based on there being less evidence of waning vaccine effectiveness for flu vaccine in children (JCVI, 2023). Modelling has also shown that starting the flu vaccination programme for children in September might well reduce rates of influenza in older adults, due to the indirect protection the programme offers (Hodgson et al, 2017). Consideration was also given to the complexity of delivering the children's programme, especially to school age children, in the autumn term (JCVI, 2023).

There was no change of timing for the offer of flu vaccine to pregnant women. It was felt that narrowing the window at which flu vaccine could be offered to pregnant women might have an adverse impact on vaccination opportunities for them, which may coincide with antenatal appointments in later stages in their pregnancy (JCVI, 2023).

AVAILABLE FLU VACCINES

For many years now the flu vaccines advised and available in the UK have been differentiated for different eligible groups according to age. This differentiation is based on expert advice from JCVI, after its consideration of the evidence of vaccine efficacy and effectiveness of different vaccine types in different age groups as published in both trials and real-world generated data.

This season, 2024–25, the initial advice regarding which flu vaccines would be marketed and advised in the UK seemed straightforward and almost unchanged compared to the 2023–24 season (UKHSA, 2024).

One notable change compared to last season is that the use of cell-based quadrivalent influenza vaccine (QIVc) for children aged six months to two years of age is no longer

'off-label', as it was in 2023–24 (UKHSA, 2023a). This follows an extension of the QIVc license down to children aged six months of age (Electronic Medicines Compendium [EMC], 2024). This change has been reflected in this year's patient group direction (PGD) for inactivated influenza vaccine published on 1st July 2024 (UKHSA, 2024d).

“A further challenge for immunisers in general practice (and some community pharmacies) this autumn is the announcement on 24th June 2024 that from 1st September 2024 there will be two new programmes offering respiratory syncytial virus (RSV) immunisation.

JCVI had advised that they would like to see more use of recombinant quadrivalent influenza vaccine (QIVr) in the 2024–25 programme, to improve estimates of vaccine effectiveness, based on data from multiple seasons of this vaccine's performance (JCVI, 2024). Unfortunately, this proposed increase in the use of QIVr will not be possible this year. A communication from the manufacturer informed UK health officials that they were unable to supply QIVr due to a manufacturing incident resulting in significant loss of product (UKHSA, 2024). This led to a statement of amendment to the annual flu programme plan (UKHSA, 2024). As well as adjuvanted QIV still being recommended for older adults, the amendment makes it clear that high-dose quadrivalent inactivated influenza vaccine (QIV-HD) is suitable for older adults.

This QIV-HD vaccine had previously been advised by JCVI (JCVI, 2023a), but was not originally being marketed by Sanofi in the UK for this 2024–25 season. As well as JCVI updating their advice in June

2024 (JCVI, 2024) the 'influenza vaccines marketed in the UK' chart has been updated to include QIV-HD (UKHSA, 2024e) and the PGD and national protocols for inactivated influenza vaccines have been amended to reflect that QIV-HD is licensed from age 60 upwards (UKHSA, 2024d; UKHSA, 2024f).

OTHER AUTUMN IMMUNISATION PROGRAMMES

A further challenge for immunisers in general practice (and some community pharmacies) this autumn is the announcement on 24th June 2024 that from 1st September 2024 there will be two new programmes offering respiratory syncytial virus (RSV) immunisation. A RSV vaccine will be available for older adults (aged 75–79 years) and pregnant women, to protect their infants with passive immunity (UKHSA, 2024g). It is also likely that JCVI will advise a Covid-19 autumn vaccination programme (NHS England, 2024) (at time of writing details of that programme are not yet available). These extra vaccination programmes, along with winter pressures generally, will impact on what already is a very resource consuming period of general practice. GPNs and other immunisers should be carefully planning delivery of these vaccination programmes now in order to be able to invite eligible patients, and perhaps deliver eligible vaccines concomitantly, and so lessen the risk of poor uptake and poor outcomes among vulnerable patients. More details regarding the RSV vaccination programmes can be found at: www.gov.uk/government/collections/respiratory-syncytial-virus-rsv-vaccination-programme

FUTURE INFLUENZA VACCINE LANDSCAPE

Every year, twice a year (once for the northern hemisphere and once for the southern hemisphere), the World Health Organization (WHO) announces the recommendations for the viral composition of influenza vaccines for the coming influenza seasons. In February 2024, following a four-day meeting of advisory group experts, WHO announced

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1. Velickovic VM, Prieto PA, Krga M, Jorge AM. Superabsorbent wound dressings versus foam dressings for the management of moderate-to-highly exuding venous leg ulcers in French settings: An early stage model-based economic evaluation. Journal of Tissue Viability. 2022;31(3):523–30. 2. Velickovic VM, Lembelembe J P, Cegri F, Binic I, Abdelaziz AB, Sun S, et al. Superabsorbent wound dressing for management of patients with moderate-to-highly exuding chronic leg ulcers: An early stage model-based benefit-harm assessment. The International Journal of Lower Extremity Wounds. 2021.

the composition for the northern hemisphere vaccines (WHO, 2024).

For several years now, influenza vaccines have been composed using four strains of influenza viruses, two A strains and two B strains (one strain from each of the B strain lineages; Yamagata and Victoria; UKHSA, 2023). As discussed earlier, the impact of Covid-19, and subsequent non-pharmaceutical measures to control its spread, have resulted in some epidemiological changes to influenza (UKHSA, 2024a). A marked change has been the possible elimination of the influenza B/Yamagata lineage (Paget et al, 2022). There have been no confirmed detections of circulating B/Yamagata lineage viruses after March 2020 (WHO, 2023). Consequently, WHO recommended that trivalent influenza vaccines containing three viruses, two A strains and one B virus from the B/Victoria lineage, should be used in the 2024–25 season (WHO, 2024).

Although some countries, such as the United States of America, are using trivalent influenza vaccines this season (Centers for Disease Control and Prevention [CDC], 2024), the influenza vaccines available in the UK for the 2024–25 season are still quadrivalent. It is highly likely that for the 2025–26 season trivalent vaccines (with no B/Yamagata lineage virus) will be marketed in the UK.

CONCLUSIONS

The vaccination programmes, including for flu, delivered in the UK are numerous, increasingly comprehensive and complex. Despite this, the uptake of vaccination programmes in the UK is generally high, higher than many other countries. This is testament to well trained and competent immunisers, a large proportion of them being GPNs.

It can be a challenge to stay up to date and competent with so many changes to the national immunisation programme each year. There are good resources available and opportunities to update

Box 1 Vaccination resources

- Save the Immunisation Collection webpage in your favourites: www.gov.uk/government/collections/immunisation
- Save the Green Book 'Immunisation against infectious disease' in your favourites: www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book
- Subscribe to the publication 'Vaccine Update': <https://public.govdelivery.com/accounts/UKHPA/subscribers/new?preferences=true>
- Complete or re-do e-learning immunisation modules, especially if unable to access other training opportunities: www.e-lfh.org.uk/

“... the uptake of vaccination programmes in the UK is generally high, higher than many other countries. This is testament to well trained and competent immunisers, a large proportion of them being GPNs.

knowledge, particularly for the influenza vaccination programme. With changes happening every flu season, immunisers should endeavour to access annual flu vaccination updates, 'e-learning for health' flu immunisation modules (NHS England, 2024a), or stay up to date via self-directed learning.

This paper has summarised changes and challenges announced to date, but a further challenge will be for immunisers to be alert to changes which may be announced before or even during the flu vaccination programme delivery period. In addition to the references and links in this article, Box 1 contains resources to help immunisers keep up to date. **GPN**

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Young B, Sadarangani S, Jiang L, Widler-

Key points

- The vaccination programmes, including for flu, delivered in the UK are numerous, increasingly comprehensive and complex.
- The national influenza vaccination programme of the UK is highly successful, changeable and progressive and can feel relentless in its delivery.
- Without such large numbers of our eligible, and most vulnerable, population receiving a flu vaccine, the cases of severe disease, hospitalisation and death from influenza would certainly be very much higher each season.
- There is an expectation that the majority of flu vaccinations will be completed by end of November 2024.
- This shorter 'window' of opportunity to offer and administer vaccines to the eligible adult population will obviously increase pressure on immunisation providers, particularly general practice.
- A RSV vaccine will be available for older adults (aged 75–79 years) and pregnant women, to protect their infants with passive immunity.
- GPNs and other immunisers should be carefully planning delivery of these vaccination programmes now in order to be able to invite eligible patients, and perhaps deliver eligible vaccines concomitantly, and so lessen the risk of poor uptake and poor outcomes among vulnerable patients.

Smith A, I-Cheng Chen M (2018) Duration of influenza vaccine effectiveness: a systematic review, meta-analysis, and meta-regression of test-negative design case-control studies. *J Infect Dis* 217(5): 731–41

Revalidation Alert

Having read this article, reflect on:

- Why it is important to keep up to date with the national flu immunisation programme
- The variability of influenza activity and the impact this can have
- Education you give patients as to why they should be immunised
- Your knowledge of the 2024–2025 season.

✓ Then, upload the article to the free GPN revalidation e-portfolio as evidence of your continued learning: www.gpnursing.com/revalidation

Experiences of asylum seekers and refugees accessing primary care

The amount of migration and people seeking asylum in the UK is increasing due to people leaving their country as a result of fear of persecution. There is a lack of knowledge regarding migrants' rights to healthcare and barriers which exist trying to access this, including in the primary care setting. This literature review explored the experience of accessing services in the primary care setting from the viewpoint of asylum seekers and refugees (ASRs) and thematic analysis was conducted. The three themes identified were barriers to accessing primary care for ASRs, increased and inappropriate use of emergency services, and risks to public health. As it is a human right to seek asylum from persecution and receive appropriate healthcare in the host country, it is important that primary care is accessed by this population. This will help to prevent inappropriate attendance in emergency departments and promote seeking help before serious illness ensues. Primary care should provide compassionate and non-judgemental care to encourage a trusting relationship and promote health-seeking behaviour.

KEY WORDS:

- Asylum seekers and refugees
- Access to primary care
- Barriers
- Systemic barriers
- Cultural and linguistic barriers

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Photograph: arlo/Shutterstock

An asylum seeker is someone who has made a legal application to be granted asylum, due to fear of persecution in their own country, and is awaiting a decision whether they will be granted refugee status or allowed to stay for humanitarian reasons (Sturge, 2024). In 2023, 67,337 asylum applications were made in the United Kingdom (UK) (Sturge, 2024). Of these, 41% were an Asian nationality and 21% were African, with the remaining people coming from Middle Eastern and European countries (Sturge, 2024).

People entering the UK via crossing the Channel in small boats has become an extremely worrying and dangerous route. This phenomenon started in 2018 with 299 people using this route and has risen to 29,437 in 2023 (Sturge, 2024). Thus, the recently passed

“ ... asylum seekers and refugees (ASRs) encounter significant barriers, such as prejudice, poor health literacy and inability to understand verbal and written language particularly in primary care, when accessing appropriate healthcare within the UK.

Safety of Rwanda (Asylum and Immigration) Act 2024 is to serve as a deterrent for people making this unsafe and illegal migration route to the UK. However, the newly elected Labour government has vowed to retract this bill. Prior to this, the 2014 Immigration Act created a so called 'hostile environment', also

with the intention of reducing net migration to the UK (Glennerster and Hodson, 2019). The Immigration Act 2014 aimed to limit access to public services, including healthcare, and restrict access to stable housing and employment for individuals from countries outside the European Economic Area, applying for long-term or permanent re-settlement status within the UK (Glennerster and Hodson, 2019; Pollard and Howard, 2021). These legislative changes have been strongly opposed, with critics arguing that the consequences of such strategies reduce health-seeking behaviours, delay necessary treatments and interventions, and promote a culture of institutional prejudice and discrimination and can worsen health inequalities faced by migrants (Hiam and McKee, 2016; Hiam et al, 2018; Donà, 2021).

It is acknowledged that asylum seekers and refugees (ASRs) encounter significant barriers, such as prejudice, poor health literacy and inability to understand verbal and written language, particularly in primary care, when accessing appropriate healthcare within the UK (Cuthill, 2016; Hiam and McKee, 2016; Iqbal et al, 20221).

In England, Wales and Scotland, all ASRs and refused asylum seekers have the legal right to free access to general practice (GP) and primary care services, regardless of immigration status. Furthermore, an inability to provide proof of address should not inhibit this (Office for Health Improvement and Disparities, 2014). If a GP practice refuses to register a patient for reasons such as they are not accepting new patients, the patient lives outside of their area, or they have previously been removed from the surgery, the patient must be provided with the decision and rationale within 14 days of the decision. A GP practice must offer any immediate necessary treatment for up to 14 days, free of charge (Office for Health Improvement and Disparities, 2014). Appropriate access to primary care services for ASRs is fundamental when supporting health prevention and promotion and reducing inappropriate use of acute emergency services.

SEARCH STRATEGY

Available pertinent literature regarding ASRs and their experience of primary care was sourced using databases AMED, CINAHL Plus, Ovid MEDLINE and Scopus, with search terms 'asylum seekers', 'refugees', 'migrants', 'immigrants', 'healthcare access', 'healthcare barriers', 'primary care' and 'nursing'. Boolean operators and truncation were applied to broaden the search. The search results were limited to sources between 2014 and 2024, published in English, and referring to primary research or including data from the UK. This yielded 12 studies which were critically appraised and thematic analysis undertaken to identify key findings in the literature. Three themes were identified, namely:

- Barriers to accessing primary care for asylum seekers and refugees
- Increased and inappropriate use of emergency services
- Risks to public health.

BARRIERS TO ACCESSING PRIMARY CARE FOR ASRs

ASRs experience several significant barriers when accessing primary healthcare in the UK. The most cited barriers include:

- Language
- Limited knowledge of healthcare systems and entitlements
- Poor cultural competence among staff
- Excessive charges
- Fear of deportation
- Gatekeeping culture
- Misunderstood registration policies
- Transient legal settlement status (Fang et al, 2015; Poduval et al, 2015; 2019; Rafighi et al, 2016; Kang et al, 2019; Tomkow et al, 2019; Weller et al, 2019; Papageorgiou et al, 2020).

Many ASRs arrive in the UK with little or no financial security and may also be prevented from working legally while their resettlement application is processed (Poduval et al, 2015). ASR participants in Kang et al's (2019) study refer to the difficulties they encounter when paying for travel costs for health appointments, as they are prohibited from working and receive £37.75 per week. So, even though the treatment in primary care is free, it is difficult for them to attend due to financial constraints. Furthermore, undocumented migrants can avoid seeking help for fear of being arrested or deported (Rafighi et al, 2016; Weller et al, 2019). Indeed, the fear of arrest was found to prevent people from accessing primary care even for serious illness (Mudiyarabikwa et al, 2022).

Kang et al (2019) interviewed 18 participants in Greater Manchester, which included seven males and 11 females aged 18–47 years old. Six were refugees, eight were asylum seekers and four were refused asylum seekers. The dominant narrative of this data was that primary care services were difficult

Practice point

Do you know the barriers which are present when accessing health services in the primary care setting for asylum seekers and refugees?

to navigate. They advised that there was no support to complete the necessary paperwork to register with a GP so they utilised their social contacts to help them to do this. This is further supported by a study in London which also found the registration process with GPs to be very difficult (Britz and McKee, 2016). Rafighi et al (2016) commented that GP surgeries were requesting formal documents to be produced, such as bank statements or proof of residency in the area, which they did not have. It was noted that there appears to be a disconnect with people's theoretical rights and their practical experience of utilising these rights to gain access to healthcare in the primary care setting. The most recent guidance available regarding NHS entitlements and migrant health, stipulates that a GP practice cannot refuse a patient purely based on their inability to provide proof of address or immigration status. However, it is to be noted that these studies took place before this update and as such more work is needed to explore if this barrier to access has now reduced.

There is a scarcity of interpretation services within primary care, largely due to minimal funding, thus meaning availability can be poor and with a limit on a range of dialects (Pollard and Howard, 2021; Weller et al, 2021). Consequently, ASRs report being unable to access healthcare services until the point of emergency, or receiving poor quality care due to inaccurate translation of their concerns and symptoms (Fang et al, 2015; Harrison and Daker-White, 2019). Fang et al (2015) held five focus groups, which included 56 Somali and 10 Iraqi people. The participants reported that interpreters were not available in GP services. Khanom et al (2024)

Practice point

How can you, as a healthcare professional, promote an empathetic and non-judgemental approach to care for asylum seekers and refugees?

conducted telephone interviews with 31 healthcare providers in Wales from a range of settings, including primary care, and they knew little about how to access interpreters or how to use a telephone interpretation service.

Many ASRs have left a life of war, political upheaval and persecution and have traumatic and complex backgrounds. As such, a 10-minute GP consultation is not sufficient time to build a trusting relationship to disclose sensitive details (Fang et al, 2015; Kang et al, 2019). Moreover, if the person is unable to communicate during this time, due to a lack of interpretation provision, combined with a short consultation time, their health needs will not be addressed appropriately.

Alongside language barriers, staff working in primary care should also be culturally aware when working with different ASRs. For example, men may not be permitted to treat female patients, there are different parenting norms, and healthcare professionals may encounter incidences of female genital mutilation (Khanom et al, 2024). While these may not prove to be a barrier, it does depend on staff provision and resource to accommodate certain cultural needs. Furthermore, gatekeepers in primary care such as receptionists can be disrespectful and discriminatory, such as the language they use and the way they can demand excessive documentation to register (Poduval et al, 2015; Rafighi et al, 2016; Mudayarabikwa et al, 2022).

Weller et al (2019) reviewed data from 1474 consultations at Doctors of the World (DOTW) clinic based in London with outreach clinics in Brighton. DOTW is a humanitarian organisation that provides care to those who are excluded from NHS

healthcare. For the asylum seeker population, they cited a previous poor experience was the main reason they did not access healthcare. It is suggested that if people feel judged and stigmatised, they will not return to primary care when needed, which can lead to poor health and attendance when illness is at a critical level. When working with patients of all backgrounds, it is essential that staff are kind and respectful, irrespective of their position.

“It is suggested that if people feel judged and stigmatised, they will not return to primary care when needed, which can lead to poor health and attendance when illness is at a critical level.”

INCREASED AND INAPPROPRIATE USE OF EMERGENCY SERVICES

Access to primary care has been shown to be limited for ASRs, which consequently leads to inappropriate utilisation of emergency services and avoidable negative health outcomes (Britz and McKee, 2016; Weller et al, 2021). Many ASRs reported that barriers to accessing primary services, such as discriminatory treatment and mistrust of the health system, meant that they would delay seeking help until the point of emergency (Harrison and Daker-White, 2019). ASRs frequently referred to having little or no awareness of which primary care services they were entitled to or how to access them (Kang et al, 2019). Moreover, ASRs' only awareness of available and accessible healthcare was to attend A&E departments (Poduval et al, 2015; Tomkow et al, 2019).

Due to barriers in accessing primary care services, such as GPs and general practice nurses (GPNs), a secondary outcome is an increased use of emergency and acute care services for lower acuity conditions by ASRs than the native population (Weller et al, 2019). This inappropriate

use of A&E departments places an additional pressure on the workforce and resources, when these are already at maximum capacity (Britz and McKee, 2016).

Concerns raised in the literature are that this perpetuates racial profiling and prejudicial attitudes towards ASR communities and increases the financial burden on the NHS due to unnecessary pressure on costly emergency services (Britz and McKee, 2015; Poduval et al, 2015; Tomkow et al, 2019). Therefore, if primary care was utilised as it should be, it is suggested that reactive attendance at A&E departments would reduce this additional pressure. However, it is suggested that presently A&E is being used by the general population, not just ASRs, due to lack of access to appointments in primary care.

ASRs generally need to be in good health to embark upon difficult and dangerous journeys across international borders in search of safer environments and are therefore usually healthy upon arrival to the UK (Britz and McKee, 2015). However, poor health can be exacerbated by wider social determinants, such as poor living conditions, unemployment, and financial hardship (Britz and McKee, 2015).

People living with long-term conditions such as human immunodeficiency virus (HIV) may also delay presentation at primary care services for a variety of reasons. Poor social factors can impact on these conditions becoming worse and attendance at A&E can then result in an admission. Thus, the cost shifts from primary care where preventative, supportive care can take place, to a potentially avoidable acute hospital admission (Papageorgiou et al, 2020).

Practice point

How can you increase and support attendance to primary care services to promote health and reduce inappropriate attendance at emergency departments?



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RISKS TO PUBLIC HEALTH

Limited health access and poor health-seeking behaviours among ASRs are linked to a variety of socioeconomic wider determinants and risks to public health (Mudiyarabikwa et al, 2021; Weller et al, 2019; Britz and McKee, 2016). Asylum seekers have the same rights to healthcare in the UK as any resident populations (World Health Organization [WHO], 2017). However, Weller et al (2019) found that those awaiting confirmed resettlement were twice as likely to have been wrongly denied access to NHS services on the grounds of their immigration status. By denying primary care to an already limited number of the ASR population who know how to access it, necessary interventions are delayed, and a culture of mistrust is generated (Weller et al, 2019; Mudiyarabikwa et al, 2022).

Mudiyarabikwa et al (2022) found that ASRs arriving in the UK within the last five years had less access to primary care and more complex health problems than those from the previous five years. This lack of primary care engagement can prevent treatment for infectious diseases, which threaten the safety of the broader population, and is intrinsically linked to wider determinants of public health (Rafiqhi et al, 2016). Furthermore, as GPs and GPNs can play a crucial role in immunisations, it is imperative that ASRs can access them to prevent the risk of spread of infectious diseases (Britz and McKee, 2016).

“It is a human right to seek asylum from persecution across international borders, and to attain the highest level of achievable health within the host nation throughout the resettlement process.

‘Hostile environment’ policies also impose restrictions on legal employment and access to safe and appropriate housing for ASRs arriving and already residing in the UK (Mudiyarabikwa et al, 2022). As a result, ASRs are often forced into shared accommodation unsuitable for their circumstances or unsafe and unregulated accommodation from private landlords. They are frequently relocated by local authorities and forced into working multiple jobs, often illegally, and in unsafe conditions (Mudiyarabikwa et al, 2021). This temporary and unstable housing makes consistent primary care difficult to maintain due to frequently changing addresses and contact details (Harrison and Daker-White, 2019). Similarly, employment restrictions for ASRs mean that they are vulnerable to unstable and dangerous working conditions and modern slavery, which has a detrimental impact on their physical and mental health (Kang et al, 2018; Mudiyarabikwa et al, 2022).

Weller et al (2019) highlight the need for encouraging health literacy and health promotion among ASRs, as their immunisation and

screening uptake is consistently lower than the native population. This poses a public health risk due to the potential for increasing incidence of communicable disease and exacerbating health disparities for chronic conditions such as cardiovascular disease and diabetes (Mudiyarabikwa et al, 2021; Weller et al, 2019).

CONCLUSION

It is a human right to seek asylum from persecution across international borders, and to attain the highest level of achievable health within the host nation throughout the resettlement process. It is important that ASRs are aware that they can access care in the primary care setting to promote health and wellbeing and avoid inappropriate attendance at A&E departments. It is imperative that a non-discriminatory and caring approach is provided to ensure that people are not deterred from accessing primary care services as part of a wider health promotion strategy. **GPN**

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Key points

- The amount of migration and people seeking asylum in the UK is increasing due to people leaving their country as a result of fear of persecution.
- All ASRs and refused asylum seekers have the legal right to free access to general practice and primary care services, regardless of immigration status.
- ASRs experience several significant barriers when accessing primary healthcare in the UK.
- Undocumented migrants can avoid seeking help for fear of being arrested or deported.
- There is a scarcity of interpretation services within primary care.
- Many ASRs have left a life of war, political upheaval and persecution and have traumatic and complex backgrounds.
- Alongside language barriers, staff working in primary care should also be culturally aware when working with different ASRs.
- Due to barriers in accessing primary care services, such as GPs and GPNs, a secondary outcome is an increased use of emergency and acute care services for lower acuity conditions by ASRs than the native population.
- It is imperative that a non-discriminatory and caring approach is provided to ensure that people are not deterred from accessing primary care services.

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Understanding the role of fractional exhaled nitric oxide (FeNO)

Fractional exhaled nitric oxide (FeNO) testing is a simple, safe, non-invasive test which is suitable for use in primary care provided it is carried out by a competent clinician who can interpret the results. Raised FeNO levels can only be found when type-2 airway inflammation is present (Wang et al, 2023). FeNO testing is currently regarded as an optional test to identify eosinophilic asthma for those with an intermediate probability of asthma. The question is, could FeNO testing lead to a more personalised approach for the management of airways diseases? This article discusses the current recommendations, the relevance of FeNO testing, along with the limitations and ways to utilise FeNO testing in a primary care setting.

KEY WORDS:

- Nitric oxide
- FeNO testing
- Asthma
- Asthma pathway

Linda Pearce

Independent respiratory nurse consultant

Despite significant NHS expenditure for asthma management in the UK (Asthma + Lung UK, 2023a), there has been no improvement in the rate of acute exacerbations of asthma or asthma-related deaths since the National Review of Asthma Deaths [NRAD] (Royal College of Physicians [RCP], 2014). Asthma is heterogeneous and characterised by variable airflow obstruction, hyperresponsiveness, with symptoms which can include wheeze, cough, breathlessness and chest tightness (National Institute for Health and Care Excellence [NICE], 2021).

There is no single test for the diagnosis of asthma. However, careful history-taking, evaluation of the symptoms along with objective testing for reversible airway obstruction through spirometry and serial peak flow monitoring, blood tests for eosinophilic airway inflammation and immunoglobulin E (IgE) skin-prick testing for atopy are standard (NICE, 2021). The current British Thoracic Society/Scottish Intercollegiate Guidelines Network (BTS/SIGN) asthma guidelines state that those individuals with a high probability of asthma do not require FeNO testing

and that FeNO testing is an optional extra test which could be used for those with intermediate probability of asthma (BTS/SIGN, 2019). Asthma + Lung UK (2023b) supports this guidance, stressing the importance of the right test at the right time.

National and international respiratory guidelines recommend the use of FeNO testing where there is diagnostic uncertainty (American Thoracic Society/European Respiratory Society [ATS/ERS], 2005; NICE, 2021). The aim is to improve asthma management by optimising correct therapy and adherence and to support the need for biological management of severe asthma (Holguin et al, 2020). In a small study, 23 healthcare professionals — including five GPs, 13 general practice nurses (GPNs), and five clinical pharmacists, and 22 adults with asthma — completed interviews to determine perceptions of FeNO testing being introduced into routine consultations (Santillo et al, 2022).

The outcomes were positive for a more objective measurement which would contribute to personalising the consultation to improve asthma outcomes. The main barriers to implementation were reported as the cost of the analyser, cost of filters, care and maintenance of the analysers, along with lack of knowledge about factors that could influence the results and how to interpret the test results correctly (Santillo et al, 2022).

Nationally and internationally a more coordinated care pathway at each phase of the asthma pathway, i.e. diagnosis, treatment and management, is needed to provide a more personalised approach to optimise asthma care (Haldar et al, 2008; Hannane et al, 2019). The BTS, SIGN and NICE are working together on UK-wide guidance which is expected to be published in the autumn of 2024. One of the aims of this joint working is to improve accuracy of diagnosis (NICE, 2021).



Photograph: Taisiya Kozorez/Shutterstock

If FeNO testing is to be a sustainable part of diagnostic clarity in the clinical pathway with the aim to personalise asthma diagnosis and management, long-term infrastructure, training and financial resources are necessary (Wessex Academic Health Science Network, 2023).

To comprehend the relevance of FeNO testing to aid diagnosis there should be an understanding of how nitric oxide in the airways is produced. Nitric oxide production has a normal and important physiological role in the airways (*Figure 1*). In the lungs, nitric oxide originates in bronchial epithelium and has a role in pulmonary neurotransmission, host defence, relaxation of bronchial and vascular smooth muscles, and inhibits inflammatory cell signalling proteins (Fuhua et al, 2000). Over production of nitric oxide as a result of type 2 inflammation results in a pathophysiological impact (*Figure 1*). Production levels of nitric oxide in the airways varies with different disease states and FeNO testing as a stand-alone test is not conclusive of a specific disease (Fuhua et al, 2000). For example, asthma, chronic rhinosinusitis, allergic rhinitis and eosinophilic chronic obstructive pulmonary disease (COPD) are examples of type 2 airway inflammation, which involves a complex allergic cellular mechanism resulting in raised blood eosinophils and high FeNO (Maspero et al, 2022).

Couillard et al (2022) developed a prototype risk scale based on biomarkers of high FeNO of 50 parts per billion (ppb) or higher, and raised blood eosinophils of $0.30 \times 10^9/L$ or higher, as increasing the risk of acute exacerbation of asthma. This is based on interleukin-13 (IL-13), which is driven by nitric oxide increasing blood eosinophil levels to the airways. Interleukin-5 (IL-5) drives systemic blood eosinophils (*Figure 2*). FeNO testing as a diagnostic biomarker of respiratory tract inflammation is more accurate for confirming a diagnosis rather than excluding a diagnosis, as FeNO testing will not identify non type 2 inflammatory types of asthma (Karrasch et al, 2017). A combination of symptoms scores, specifically wheeze, spirometry and FeNO,

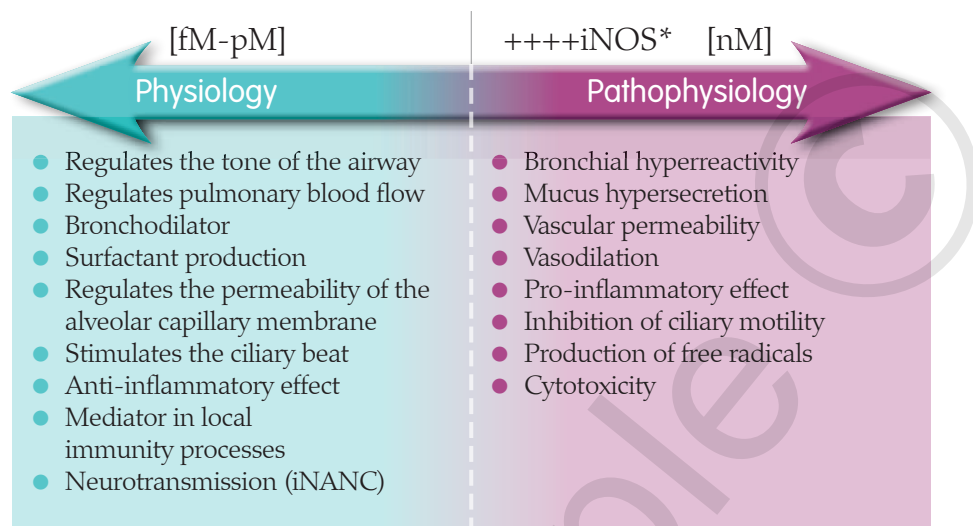


FIGURE 1. Function of nitric oxide in the airways (adapted from Escanilla-Gill et al, 2022).
* iNOS = inducible nitric oxide synthase.

improves the diagnostic accuracy of asthma (Louis et al, 2023).

Several studies have also identified that raised FeNO levels could be a predictor of future asthma (Pijnenburg, 2019; Muntean et al, 2020). Higher levels of FeNO are also associated with lower lung function and increased risk of future asthma exacerbation (Murugesan et al, 2023).

There are a number of devices available on the market for measuring FeNO, some of which have been reviewed for equivalence. Based on the evidence that was available, differences in absolute values between the results of these

devices were relatively small (NICE, 2014). A number of non-airway factors can influence FeNO results by increasing or decreasing the FeNO levels (*Table 1*). Patient preparation includes preparing the person before they attend the appointment. They should avoid exertion for at least an hour prior to the appointment, as exertion is known to reduce nitric oxide levels (Baranski et al, 2021). Smoking, vaping, caffeine and alcohol should be avoided for at least an hour before testing and nitrate-rich foods should be avoided for at least three hours before the test (ATS/ERS, 2005). FeNO measurement can be undertaken from the age of five (BTS/SIGN, 2019; NICE, 2021).

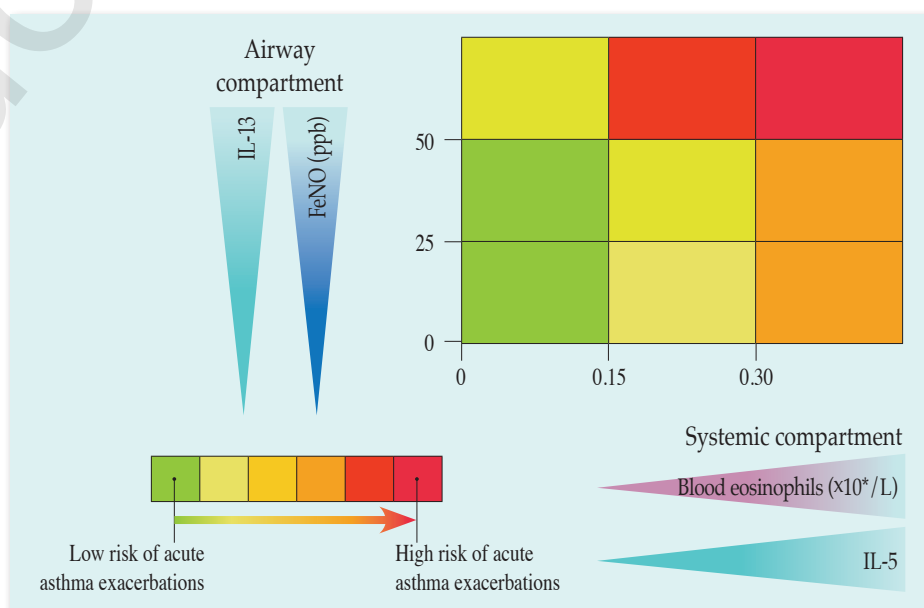
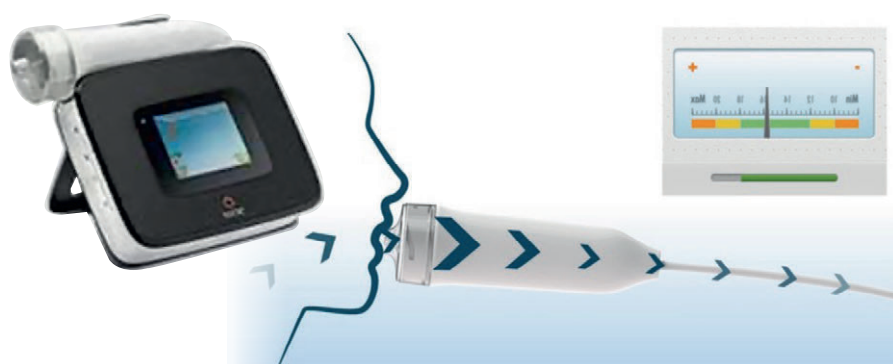


FIGURE 2. Relationship between blood eosinophils and FeNO (Wang et al, 2023, adapted from Couillard et al, 2022).



FIGURES 3 AND 4.

Examples of a FeNO machine and the display screen demonstrating good technique. Reproduced by kind permission of NIOX.

If spirometry is being undertaken during the same consultation, FeNO testing should be performed first as the forced manoeuvres used with spirometry may influence and lower the FeNO value (ATS/ERS, 2005).

Technique for FeNO testing may vary slightly depending on the device, but the principles are the same, namely:

- Switch on the FeNO analyser
- Attach mouth filter to handle
- Patient empties lungs
- Inhale through the device for three seconds
- Exhale slow and steady through the handle for 10 seconds. Children can blow out for a shorter time of six seconds. Patient can observe the monitor to ensure they maintain a steady flow (Figures 3, 4), animation is available on the devices for children
- Once completed, the results will be displayed on the machine.

This test can be repeated if necessary to get an accurate technique/result.

Dweik et al (2011) provided an evidence base to standardise the interpretation of FeNO test results. As can be seen in Table 2, these results are categorised as low, intermediate and high. NICE guidance (2014; 2021) states that the role of FeNO is to aid diagnosis of asthma. A FeNO level of ≥ 35 ppb in children aged 5–16 and FeNO level of ≥ 40 ppb in adults from the age of 17, along with history and symptoms suggestive of asthma and supported by other positive test results, such as serial peak flow monitoring, obstructive spirometry

or positive spirometry reversibility, should be considered a positive test result.

A programme to introduce and implement FeNO testing through the provision of training modules and equipment and consumables across the 15 Academic Health Science Networks in England between April 2021 and March 2023 reported 58,000 new asthma diagnoses (Wessex Academic Health Science Network 2023). However, beyond supporting a diagnosis of type 2 inflammation at the point of diagnosis, there are insufficient studies to support the use of regular FeNO guided management to aid any significant asthma control, asthma-related quality of life or acute exacerbations of asthma (Wang et al 2023). However, Hanania et al (2018) reported that clinicians modified medication regimens, either starting, stopping or adjusting inhaled corticosteroids following FeNO test results. FeNO testing may be beneficial to identify non-compliance to inhaled corticosteroid or the need to increase treatment. If, despite regular use of high dose

inhaled corticosteroids, the person remains symptomatic and high FeNO test results remain, referral to a respiratory specialist for assessment for biological therapies should be considered (Hoggins et al, 2022).

It is estimated that cost-savings can be made by reducing incorrect diagnosis of asthma and achieving better asthma control, which will result in fewer follow-up appointments and optimise medication management (Asthma + Lung UK 2023b). Current recommendations are that FeNO testing should be used as an optional investigation to test for eosinophilic inflammation when there is diagnostic uncertainty. As spirometry is recommended as part of the diagnostic pathway, it would make both practical and economic sense for FeNO testing to be carried out in community diagnostic centres, which are ideally locality based or where diagnostic services visit GP practices to carry out these tests (Stonham and Baxter, 2019). This would ensure that trained healthcare professionals who are confident and competent to undertake the test and interpret the results are performing these tests on a regular basis. Sustainable community funded pathways to include FeNO testing as an objective measure of type 2 inflammation should provide support for clinical decisions to personalise asthma care.

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Recommendations for standardized

Table 1: Factors that can influence FeNO results (ATS/ERS, 2005)

Increase FeNO levels	Decrease FeNO levels
■ Nitrate-rich foods — leafy vegetables, including spinach, lettuce, kale, celery, leek, beetroot (Kroll et al, 2018) ■ Increased in men ■ Tall people ■ Older people ■ Active rhinovirus ■ Atopy	■ Chronic alcohol consumption ■ Tobacco ■ Recent caffeine consumption ■ Lower in children ■ Obesity ■ Gastroesophageal reflux disease (GERD) ■ Current inhaled or oral steroids ■ Vaping (Kandhola et al, 2023)

Table 2: Interpretation of FeNO test results (adapted from Dweik et al, 2011)

FeNO adults	<25ppb	25–50ppb	>50ppb
FeNO children	<20ppb	20–35ppb	>35ppb
Eosinophilic airway inflammation	Unlikely	Intermediate	Present – high
Diagnosis	Consider alternative	Evaluate clinical context	Likely to benefit from inhaled steroid

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Managing childhood constipation in primary care

Childhood constipation is a common and often distressing condition affecting both the child and their family. It is frequently encountered in primary care settings and, if not managed effectively, can lead to significant physical and psychological morbidity. Effective management hinges on a comprehensive approach that encompasses assessment, diagnosis, treatment, and understanding the psychological impacts. This article covers the critical aspects of assessing and diagnosing childhood constipation, including abdominal examination, recognising red flags and differential diagnoses, further investigations, and the psychological implications of the condition. It also delves into the causal reasons for childhood constipation, its effects on the child's well-being, parental frustrations due to poor management, and treatment options available.

KEY WORDS:

- Childhood constipation
- Assessment
- Diagnosis
- Management
- Well-being

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Childhood constipation is a relatively common condition, experienced by 15–30% of children in the UK (ERIC, 2024), but one that can have a significant impact on the child's physical and emotional well-being and quality of life. It can be equally distressing for parents, who often show frustration that a 'simple' presentation can result in so much distress and difficult-to-manage consequences such as soiling.

History-taking is a critical component in the diagnosis and management of paediatric constipation. The presentation of abdominal pain, stool withholding, soiling, and reduced appetite align with the classical symptoms of constipation. These symptoms not only impact the child's physical health, but also their emotional well-being and quality of life, creating a distressing scenario for both the child and their parents. The complexity of diagnosis is further accentuated by the presence of stool overflow, which may be misconstrued as diarrhoea,

“When constipation persists, the rectum can become so stretched and distended that it loses its ability to contract effectively. This can lead to a loss of sensation and the ability to perceive the need to defecate properly... .

necessitating precise communication to elucidate the nature of constipation (Diaz et al, 2023). This can occur in cases of chronic constipation where stool accumulates in the rectum and colon. When constipation persists, the rectum can become so stretched and distended that it loses its ability to contract effectively. This can lead to a loss of sensation and the ability to perceive the need to defecate properly (Bradshaw et al, 2021).

As a result, liquid stool can leak around the impacted mass, leading

to involuntary leakage or overflow of stool. This can be particularly problematic because the liquid stool may pass around the hard stool blockage, causing soiling and staining of undergarments which is distressing for children and their parents alike.

PRESENTATION OF CONSTIPATION

Children experiencing constipation typically have irregular bowel movements, sometimes going several days between motions, and characterised by the passage of firm, large stools classified as 1–2 on the Bristol stool scale (Lewis and Heaton, 1997) (Figure 1). The painful defecation process often leads to behavioural changes, such as hiding and adopting a tense posture to avoid passing stools (Rajindrajith et al, 2022), accompanied by episodes of soiling (Heron et al, 2018) and sometimes bedwetting, due to pressure on the bladder from a full rectum. However, there is some evidence that faecal disimpaction



Photograph: Ann in the UK/Shutterstock

does not necessarily improve nocturnal enuresis and, as such, treatment of children with concurrent enuresis should not focus only on constipation (Borgstrom et al, 2022).

History-taking also often reveals deficits in the patient’s dietary habits, often described as ‘fussy,’ a common characteristic among pre-school aged children. Parents may also disclose that the child’s fluid intake is suboptimal, something that can be worsened in the school age child where free access to fluid is restricted. The role of dietary factors, including insufficient fibre and fluid intake, is well-documented in contributing to constipation (Yang et al, 2012). Thus, identifying these elements is crucial for formulating effective dietary advice and interventions.

There is also evidence that constipation is more prevalent in children with autism spectrum disorder (ASD) (Wang et al, 2011). Research suggests that gastrointestinal (GI) issues, including constipation, are more prevalent in individuals with ASD compared to the general population due to a range of factors including dietary components and sensory sensitivities (McElhanan et al, 2014). Some children with ASD may have selective eating habits or sensitivities to certain foods, leading to a diet that lacks fibre-rich foods necessary for regular bowel movements. At its extreme, this can present as ARFID (avoidant restrictive food intake disorder), which can severely restrict a person’s dietary intake (Zimmerman and Fisher, 2017). Furthermore, sensory processing differences in children with ASD may affect their perception of discomfort or pain related to constipation, making it challenging for them to recognise and communicate their symptoms (Little et al, 2019).

Childhood constipation can be broadly categorised into two types: functional and organic. Functional constipation, which accounts for the majority of cases, has no identifiable cause of disease (see Box 1). Organic constipation, on the other hand, is caused by an underlying medical condition, such as Hirschsprung’s

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on its surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges (passed easily)
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. Entirely liquid

FIGURE 1.
Bristol stool scale.

disease, hypothyroidism, or spinal cord anomalies (Tobias et al, 2008).

Factors contributing to functional constipation include:

- Dietary habits, such as low fibre intake
- Inadequate fluid intake
- Toilet training issues
- School environment, including lack of access to toilets or stressors

such as exams

- Psychological stressors
- Low levels of physical activity
- Family history of constipation (Rajindrajith et al, 2022).

An important consideration is also abuse and child maltreatment, which some studies have shown are linked with constipation in adolescents (Thomas de Almeida et al, 2021).

Box 1

Rome IV criteria for functional constipation (Aziz et al, 2020)

The Rome IV criteria provide guidelines for diagnosing functional gastrointestinal disorders, including functional constipation. According to the Rome IV criteria, functional constipation is diagnosed when at least two of the following criteria are met:

- Criteria fulfilled for the last three months with symptom onset at least six months before diagnosis:
 - Straining during at least 25% of defecations
 - Lumpy or hard stools in at least 25% of defecations (Bristol stool chart 1–2)
 - Sensation of incomplete evacuation for at least 25% of defecations
 - Sensation of anorectal obstruction/blockage for at least 25% of defecations
 - Manual manoeuvres to facilitate at least 25% of defecations (e.g. digital evacuation, support of the pelvic floor)
 - Fewer than three spontaneous bowel movements per week.
- Loose stools are rarely present without the use of laxatives.
- Insufficient criteria for irritable bowel syndrome.

ASSESSMENT AND DIAGNOSIS

Initial assessment of a child presenting with constipation should include a thorough medical history and physical examination. The history should focus on the duration and frequency of bowel movements, stool consistency, presence of blood in the stool, diet, fluid intake, physical activity levels, and any previous treatments for constipation. Additionally, gathering information about the child's birth history, including prematurity, developmental milestones, and family history of gastrointestinal diseases can provide valuable context for the diagnosis.

Abdominal examination

A physical examination, particularly an abdominal examination, is crucial. The examiner should note any distension, tenderness, palpable masses, or faecal masses in the abdomen. A rectal examination, though usually avoided in the primary care setting due to discomfort and the potential for distress, may be necessary in some cases to assess anal tone, presence of faecal impaction, or other anorectal anomalies (Orenstein and Wald, 2016). This is typically carried out by a paediatrician in the secondary care setting.

Red flags and differential diagnoses

While assessing a child for constipation, it is vital to be vigilant for red flags that could indicate an underlying organic cause requiring immediate attention or referral to secondary care. These include:

- Failure to pass meconium within

the first 48 hours of life, which could suggest Hirschsprung's disease

- Significant abdominal distension with vomiting, which could indicate a bowel obstruction
- Blood in the stool, which may be a sign of an intestinal polyp or inflammatory bowel disease
- Rapid weight loss or failure to thrive, indicating a more serious underlying condition
- Unexplained fever or lethargy (Bradshaw et al, 2021).

“The experience of passing painful stools can have profound psychological effects on a child (Elkhatay et al, 2016), contributing to a cycle of chronic constipation.

Differential diagnoses to consider include coeliac disease, hypothyroidism, and cow's milk protein allergy, among others. The presence of any red flags or suspicion of an organic cause warrants further investigation and possibly referral to a paediatric gastroenterologist.

Further investigations

If the diagnosis of functional constipation is uncertain, or if there are concerns about an underlying organic pathology, further investigations may be necessary. These could include:

- Blood tests to check for thyroid function (to rule out hypothyroidism) and coeliac serology (to rule out coeliac disease)
- Abdominal X-ray to assess the extent of faecal loading and rule out obstruction
- Anorectal manometry or a barium enema, particularly if Hirschsprung's disease is suspected

(Auth et al, 2012).

In the author's experience, it can often be useful to carry out stool and blood sampling as part of the initial assessment process so that parents may more readily accept the

diagnosis of functional constipation and be more active participants in managing the condition at home.

EFFECTS ON THE CHILD'S WELL-BEING

As already alluded to, constipation can significantly impact a child's physical and emotional health. Physically, it can lead to painful defecation, leading to stool withholding behaviours. This, in turn, exacerbates the problem as the stool remains longer in the colon, where more water is absorbed, making the stool even harder and more difficult to pass. This vicious cycle can result in very large, hard stools that can cause anal fissures, adding to the pain of defecation (Bradshaw et al, 2021).

The emotional and psychological impact includes embarrassment due to faecal soiling, which is involuntary passage of stool typically in a child who is chronically constipated due to over stretching of the bowel. This can lead to social isolation, anxiety, and low self-esteem. Additionally, the discomfort and pain can reduce appetite, further compounding the problem by reducing the intake of necessary nutrients for a healthy digestive system (Kwiatkowska and Krogulska, 2021).

The experience of passing painful stools can have profound psychological effects on a child (Elkhatay et al, 2016), contributing to a cycle of chronic constipation. The pain associated with defecation can lead to stool withholding behaviours, as the child may fear the pain that comes with bowel movements. This withholding can exacerbate constipation, leading to a vicious cycle. The psychological impact extends beyond fear, including embarrassment over faecal soiling, which can affect social interactions and self-esteem. Anxiety and depression have also been noted in some cases, further complicating the condition (Elkhatay et al, 2016).

ADDRESSING PSYCHOLOGICAL COMPONENTS

It is crucial to address psychological components during treatment. In the

Practice point

Childhood constipation can be challenging for both children and their families. It can cause discomfort, pain, and sometimes embarrassment for the child, leading to emotional distress as well. Furthermore, if not addressed properly, it can lead to complications like faecal impaction or even long-term issues with bowel habits.

author's clinical experience, providing reassurance, educating the child and their family about the condition, and involving a paediatric psychologist or psychiatrist when necessary can be beneficial. Behavioural interventions, such as toilet training advice and establishing a routine, can help reduce fear and anxiety associated with bowel movements. The children's continence charity 'ERIC' (<https://eric.org.uk/>) provides a range of resources which, in the author's opinion, are fantastic for addressing psychological difficulties. These include stories, videos and a parent helpline to help navigate different aspects of toileting and constipation and 'normalise' the condition to remove some of the stigma often associated with it.

PARENTAL FRUSTRATIONS

Parents often express frustration and concern when their child's constipation is not managed effectively (Thompson et al, 2021). This frustration can stem from:

- Lack of understanding of the condition
 - Ineffective communication from healthcare providers
 - Failure of initial treatment strategies
- (Thompson et al, 2020).

Parents may also feel guilty or blame themselves for their child's condition, especially when it comes to aspects they control, such as diet and toilet training. It is often rooted in concerns for the child's well-being, fear of potential complications, disruptions to daily functioning, parental guilt, and the impact on family dynamics (ERIC, 2024). Parents naturally prioritise their children's health and comfort, thus constipation's discomfort and associated symptoms evoke distress.

Additionally, worries about complications such as faecal impaction or urinary tract problems may exacerbate parental anxiety (Kaugars et al, 2010). The potential disruption to a child's daily routine, including eating, sleeping, and social activities, further compounds parental concerns. Feelings of guilt can arise, as parents may perceive

Box 2

Treatment options (National Institute for Health and Care Excellence [NICE], 2024)

Treatment of constipation typically involves a combination of lifestyle modifications, dietary changes, and, if necessary, medication. Here's an overview of the various treatment options.

Lifestyle modifications:

- Increase physical activity: regular exercise can help stimulate bowel movements and promote overall bowel health
- Establish a regular toilet routine: encourage children to try to have a bowel movement at the same time each day, preferably after meals, as the gastrocolic reflex is often strongest after eating
- Practice relaxation techniques: stress and anxiety can contribute to constipation, so techniques such as playing music or reading a favourite book may be helpful
- Avoid delaying the urge to defecate: encourage children to respond promptly to the urge to have a bowel movement and not to suppress it.

Dietary changes:

- Increase fibre intake: foods high in fibre, such as fruits, vegetables, whole grains, and legumes, can add bulk to the stool and facilitate bowel movements
- Stay hydrated: drinking plenty of water and other fluids helps soften the stool and makes it easier to pass
- Limit constipating foods: some foods, such as dairy products, processed foods, and foods high in fat or sugar, may contribute to constipation and should be consumed in moderation.

Medication:

- Bulk-forming laxatives: these laxatives, such as psyllium or methylcellulose, work by absorbing water in the intestine, forming a soft, bulky stool that is easier to pass, and can be useful if a child struggles to increase fibre in the diet
- Osmotic first-line laxatives: examples include macrogol laxatives, which help draw water into the intestine, softening the stool and stimulating bowel movements. Should be continued for several weeks after regular bowel movements are established
- Stimulant laxatives: these laxatives, such as senna or sodium picosulphate, work by stimulating the muscles of the intestines to contract, promoting bowel movements. They are usually used for short-term relief of constipation
- Stool softeners: these medications, such as docusate sodium, help soften the stool, making it easier to pass
- Lubricant laxatives: glycerin suppository is an example of a lubricant laxative that coats the stool and the lining of the intestines, facilitating passage.

themselves to be responsible for their child's constipation, particularly if they believe it stems from dietary choices or caregiving practices. Moreover, constipation can strain family dynamics, leading to stress, frustration, or conflicts (Kovacic et al, 2015). However, by addressing parental anxiety through education, reassurance, and practical strategies, healthcare providers can empower parents to effectively manage their child's constipation while fostering a supportive family environment conducive to the child's well-being.

TREATMENT OPTIONS FOR CONSTIPATION IN CHILDHOOD

Management of childhood constipation is multifaceted, involving lifestyle and dietary modifications, behavioural interventions, and pharmacological treatments (Box 2). The primary goals are to relieve constipation, establish regular bowel habits, and prevent recurrence. Early treatment of constipation is crucial, as delaying intervention can complicate management. Guidance from the National Institute for Health

and Care Excellence (NICE, 2024) suggests a comprehensive approach, combining non-pharmacological strategies with the use of laxatives, given the limited efficacy of dietary interventions alone (Bradshaw et al, 2021). Furthermore, educating both parents and children about constipation and toilet training is a crucial part of the treatment programme, encouraging the use of a bowel habit diary, adherence to prescribed medications for disimpaction and ongoing maintenance, and providing clear information regarding the expected duration of treatment. Use of the Bristol stool chart helps parents to tangibly recognise changing bowel habits, as well as conveying to the child the relationship between impacted stool and involuntary overflow.

Dietary and lifestyle modifications

Dietary changes include increasing fibre intake through fruits, vegetables, and whole grains, and ensuring adequate fluid intake to help soften stools. Regular physical activity can also promote bowel motility.

Behavioural interventions

Toilet training and establishing a regular bowel routine are crucial. Encouraging the child to sit on the toilet for 5–10 minutes after meals, when the bowel is more likely to be active, can help establish regular habits. A footstool can also help with positioning to allow for active straining (Auth et al, 2012).

Pharmacological treatments

Macrogol (polyethylene glycol) laxatives are often the first line of pharmacological treatment for childhood constipation (NICE, 2024). They work by retaining water in the stool, making it softer and easier to pass. The dosage needs to be adjusted based on the child's response and tolerance.

DISIMPACTION

In cases of faecal impaction, a disimpaction regimen is required before regular maintenance therapy can be effective. This involves the administration of high doses of

macrogol laxatives over several days to soften and break down the stool mass, allowing it to be passed more easily. Following successful disimpaction, a maintenance dose of a laxative is usually necessary to prevent reaccumulation of stool, and parents should be counselled about the need to continue with this maintenance regimen for an extended period of time — usually at least as long as the child has been constipated for — to allow the stretched bowel to return to normal size and help overcome the psychological effects of passing painful stools that can lead to withholding (Bradshaw et al, 2021).

“... addressing psychological stressors and providing support for both the child and family are critical components of comprehensive care.

LONG-TERM MANAGEMENT AND CAUSES OF CONSTIPATION

Long-term management focuses on preventing recurrence through continued adherence to dietary, lifestyle, and behavioural recommendations, along with ongoing medication management as needed. It is crucial to educate parents and children about the nature of constipation, the importance of adherence to treatment, and when to seek further medical advice.

This enables parents to make informed decisions about their child's care (Nursing and Midwifery Council [NMC], 2018). Helping the family to adopt lifestyle and dietary changes including preventative strategies such as increased dietary fibre, regular physical activity, and appropriate toileting habits can contribute to reducing the risk of constipation, as can the judicious use of laxatives or stool softeners, while recognising any potential side-effects or risks associated with treatment. This arguably also helps to set realistic expectations about the duration and expected outcomes of

treatments, promoting adherence to the management plan and reducing unnecessary anxiety or frustration, which can arise where treatment is not adequately explained and subsequently fails.

Additionally, addressing psychological stressors and providing support for both the child and family are critical components of comprehensive care.

CONCLUSION

Effective management of childhood constipation in primary care requires a thorough understanding of its causes, implications for the child's well-being, and the frustrations experienced by parents. Healthcare professionals should adopt an approach that comprises a detailed assessment and diagnosis, including a thorough abdominal examination and consideration of differential diagnoses. Recognising red flags is crucial for identifying cases that require further investigation or referral. Moreover, understanding and addressing the psychological impacts of constipation are essential components of care.

By employing a combination of dietary and lifestyle modifications, behavioural interventions, and appropriate use of pharmacological treatments, such as macrogol laxatives and disimpaction regimens, primary care practitioners can provide effective relief from constipation. Moreover, ongoing education and support for children and their families are vital in managing this condition successfully, preventing its recurrence, and minimising its impact on the child's quality of life. **GPN**

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Key points

- Childhood constipation is a common and often distressing condition affecting both the child and their family.
- It is frequently encountered in primary care settings and, if not managed effectively, can lead to significant physical and psychological morbidity.
- Initial assessment of a child presenting with constipation should include a thorough medical history and physical examination.
- Discomfort and pain can reduce appetite, further compounding the problem by reducing the intake of necessary nutrients for a healthy digestive system.
- Parents naturally prioritise their children's health and comfort, thus constipation's discomfort and associated symptoms evoke distress.
- It is crucial to educate parents and children about the nature of constipation, the importance of adherence to treatment, and when to seek further medical advice.

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Revalidation Alert

Having read this article, reflect on:

- The critical aspects of assessing and diagnosing constipation in children
- The reasons for childhood constipation
- The psychological implications of the condition
- Your knowledge of treatment options available.

✓ Then, upload the article to the free GPN revalidation e-portfolio as evidence of your continued learning: www.gpnursing.com/revalidation

Can GPNs improve the experience of people living with cancer?

There are three million people living with cancer in the UK, which is predicted to rise to nearly 3.5 million by 2025 (Macmillan Cancer Support, 2024). The GP Contract (NHSE Contract Letter 2024/25) has protected the cancer indicators in the Quality Outcomes Framework (QOF), which are that every person should be offered an opportunity to discuss their diagnosis and be informed of the support available to them from primary care within three months of diagnosis, and a structured cancer care review should be offered within twelve months of diagnosis. General practice nurses (GPNs) already have expertise in long-term condition management and could deliver the same for people living with cancer, but most do not feel confident to do so. This article includes the author's personal reflections on her role and the development of personalised care within primary care.

KEY WORDS:

- Primary care
- Personalised care
- Cancer care reviews
- Long-term conditions
- Quality Outcomes Framework

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ROLE OF PRIMARY CARE IN SUPPORTING PEOPLE LIVING WITH CANCER

The UK population is growing and ageing. As age is a risk factor for the development of cancer, this means that more people will be affected in their lifetime. Improvements in cancer treatment and diagnosis also mean that more people are now living longer after their diagnosis and treatment. Currently, there are three million people living with cancer in the UK. It is predicted that this number will rise to nearly 3.5 million by 2025 and four million by 2030 (Macmillan Cancer Support, 2024).

Outcomes for people diagnosed with cancer in the UK have improved dramatically, with half predicted to survive their disease for at least ten years (Cancer Research UK, 2022). The NHS quality of life metric shows that people are still experiencing unmet needs because of their cancer (NHS Digital, 2021). Almost half (48%) of respondents had problems carrying out their usual activities (work,



Photograph: Olga Strel/Shutterstock

study, housework, family, and leisure activities) compared with around one in five of the general population.

As a result, for many people, cancer becomes a long-term condition with their care primarily being provided in their local community. However, while they may remain disease-free, this does not mean that they are living well as they are often living with the consequences of cancer and its

treatment. Some may also develop complications of treatment many years later, such as cardiac toxicity, steroid-induced diabetes, or being diagnosed with a second primary cancer (Macmillan Cancer Support, 2013).

Primary care is integral in helping to support people living with and after cancer, especially after anti-cancer treatment has ended, because it has the responsibility to manage long-term

conditions and to meet ongoing, or newly presenting, healthcare needs. Some of the compelling reasons for why primary care is best placed to meet those needs are outlined in *Box 1*.

Over the last decade, efforts have been made to provide personalised care to people living with cancer. As a result of Macmillan's campaigning, the *NHS Long-Term Plan* (NHS England, 2019a) committed to 'every person with a cancer diagnosis being able to access a needs assessment and personalised care plan'. While more people with cancer are being asked about their needs and personal preferences before being offered relevant information and individualised support, personalised care is still not routinely available for everyone with cancer. Indeed, while cancer alliances are working with trusts and primary care to offer personalised care interventions to people with breast, colorectal, prostate and other cancers, in the author's personal experience, in that there are over 250 different types of cancer, in primary care particularly, this is not yet happening routinely. In comparison, for the management of asthma, an annual review and personalised asthma action plan (PAAP) have become routine practice. As said, there is still some way to go for every person living with cancer to have an annual review and personalised care and support plan.

The personalised care framework (NHS England, 2019b) consists of six evidence-based components:

- Patient choice
- Shared decision-making
- Patient activation and supported self-management
- Social prescribing and community-based support
- Personalised care and support planning
- Personal health budgets and integrated personal budgets.

Ideally, personalised care takes a system-wide approach, including health, social care, public health, and wider community services (such as mental health services, leisure centres for supported exercise programmes, local self-help and support groups),

Box 1

How primary care can meet the needs of cancer patients

- Increased incidence and survival of cancer (Cancer Research UK, 2022), while good news, means that the population living with and after cancer is growing and people spend most of their time living at home in their community, not being treated in hospital. Primary care is based in their local community and is closer to home. It is where most people expect to get their healthcare needs met in the first instance
- The *NHS Long Term Plan* (NHS England, 2019a) introduced personalised care for those living with long-term conditions and primary care, and more especially GPNs, have expertise in long-term condition management, such as asthma, diabetes, high blood pressure and chronic heart disease and therefore have the transferrable skills to apply condition management to cancer
- Comorbidity in those diagnosed with cancer is common, with 70% having at least one other long-term condition and 29% having three or more (Macmillan Cancer Support, 2015), which primary care will already be managing
- National cancer patient experience surveys consistently show that people's experience of care 'out of hospital' is poorer than their experience of hospital-based care, especially during and after treatment (Picker Institute, 2022). This is an area for improvement in primary care through the delivery of the cancer quality outcomes framework, providing support that is both meaningful and impactful.

integrating, and coordinating services to best meet the person's needs.

Personalised care is underpinned by a comprehensive assessment of an individual's needs, enhancing the development of a therapeutic relationship between the person living with cancer and the general practice nurse (GPN), based on the process of listening, empathising, shared decision-making, and supporting what really matters to the person living with cancer to improve their quality of life.

The recently published strategic framework for the major conditions strategy for England (Department of Health and Social Care, 2023) recognises the importance of empowering people to make personalised care choices. It states that NHS England is committed to bringing care closer to home and supporting self-management, and acknowledges that shaping services and support around the lives of people will help give patients greater choice and control over their care. While we wait to see if and how the final strategy will deliver on this commitment, it suggests a greater scope. In the author's clinical opinion,

there has never been a better time for primary care and GPNs to better meet the needs of people living with cancer, as part of their overall health management and support.

USING CANCER KNOWLEDGE AND SKILLS AS A GPN

Knowledge and skills in cancer care are not typically regarded as core training for GPNs and despite already providing personalised care and support planning for other long-term conditions, few currently complete cancer care reviews (CCRs). However, there is a small but growing group of GPNs developing their expertise in the management of people living with cancer to mirror care and support offered to other long-term conditions (Dyer, 2023).

The author became a GPN two years ago, having worked in cancer for over 22 years in secondary care, and was employed to improve the care of people living with cancer for the practice population. Since starting, she has championed improvements in cancer care by introducing the Macmillan Cancer Support electronic holistic needs assessment tool (e-HNA) to ensure that the discussion

is based on what matters most to people living with cancer. The six personalised care questions are used as part of the e-HNA, which helps to understand the individual and what is important to them. The e-HNA also links digitally to My Care Plan, which enables a personalised care and support plan to be created based on discussion.

The Quality Outcomes Framework (QOF) (NHS England, 2023) remunerates general practices for providing good quality care. Currently, the QOF Indicators for cancer are:

- CAN001: practice establishes and maintains a register of all people with cancer
- CAN004: 50–90% of people with cancer have had a structured CCR recorded within 12 months of diagnosis
- CAN005: 70–90% of people with cancer have been offered an opportunity for discussion and informed of support available within three months of a diagnosis.

People newly diagnosed with cancer at the author's practice are initially contacted by text, with an offer of a face-to-face or phone discussion. People living with cancer are offered the chance to talk about the impact that their diagnosis has had on them and their life and links to further information and support on the practice's cancer webpage are shared. Some people find it helpful to discuss the impact of their diagnosis, but every person's circumstance is different and not every individual takes up the offer. Below are some of the valid reasons why:

- Their needs are already being met by a cancer nurse specialist (CNS) or cancer multidisciplinary team (MDT) in secondary care
- Their needs are already being met by friends and family or other sources of support, such as the local cancer information and support centre or cancer charities
- They are undergoing further tests and appointments to determine the treatment plan and therefore too busy or have too many competing appointments to want one more interaction with a healthcare professional

- They already feel overloaded with information and are feeling overwhelmed
- They are in shock at their diagnosis, trying to process its impact and not wanting to talk about it at the present time.

People living with cancer are offered a further opportunity to discuss their diagnosis and treatment, given a person may feel more able to understand and discuss their needs at a later stage or because their needs may have changed. This discussion takes a structured approach, in the form of a conversation, usually following treatment (between six and 12 months after their cancer diagnosis). This can be face-to-face or by phone and they are encouraged to bring someone with them. The purpose of the structured review is to:

- Talk about their cancer experiences and concerns
- Understand what further support is available
- Receive information they need to start to self-manage their care and wellbeing.

To do this efficiently and effectively, the author uses the Macmillan e-HNA which creates a personalised link to send to the patient to complete a holistic needs assessment in advance of the review. The e-HNA allows clinicians to prepare, anticipate needs, involve other members of the primary care team if appropriate and fully personalise the conversation around what matters to that person. Together, the personalised care and support plan (PCSP) is developed, which is sent digitally as a personalised link for them to access. For anyone living with cancer who is unable or prefers not to use digital interfaces, a paper copy of the Macmillan Concerns Checklist is sent in the post and they are asked to bring the completed form with them to guide the conversation. After the consultation, a printed copy of the PCSP is sent to the patient, with care tailored to their personal communication preferences.

DEVELOPMENT OF A NEW RESOURCE: PERSONALISED CARE

Over the past two years as a GPN, the author has learnt a great deal and

realised that there are gaps in the resources available to GPNs when it comes to cancer care. This has inspired her to develop a digital guide which captures what has been learnt in delivering effective person-centred care for patients, plus hints and tips so that others can set up CCR clinics to provide impactful and meaningful reviews, without having to find their own way through. The author then harnessed the insights and learning from colleagues embedded in primary care from across England to support the development of this much-needed resource. The insights of colleagues have helped to ensure that this resource is comprehensive and representative. The guide is aimed at all healthcare professionals delivering CCRs in primary care, from cancer care coordinators to GPs and GPNs, to help deliver consistent best practice personalised care for people with cancer. Colleagues working in secondary care may also find the guide useful and informative.

The guide is on the Macmillan website, where it is available to download as a PDF: www.macmillan.org.uk/healthcare-professionals/cancer-pathways/prevention-and-diagnosis/cancer-care-review/practical-implementation-guide-for-ccrs

WHAT MATTERS MOST TO PATIENTS DURING THEIR CCR?

The author has recently supported a young patient through their cancer pathway and asked them:

What would you want professionals to consider when talking to someone who has had a recent diagnosis of cancer?

Their response was:

It's a difficult question to answer, as not one solution fits all. The way to handle a recent diagnosis of cancer will differ from person to person, depending on their personality. But here's some of my tips:

- *Show empathy by listening to their story and make their voice heard*
- *Reassure that a treatment plan has been developed for them*

- *Make sure that the patient is aware of the 'next steps'. If not, get a copy of this information from the treating hospital (this would offer as a fail-safe safety net from any potential oversights within the system)*
- *Share information about support groups. Reassure that these groups come in all shapes and sizes to suit everyone's needs (usually easier online than in person)*
- *Keep track of their progress on their treatment plan*
- *Over time, keep track of progress and results. Offer to do blood tests at the GP practice if the patient is more local to the GP than the hospital*
- *Keep the number of points of contact to a minimum, where possible. It gives the patient a chance to develop a sense of trust and mutual respect for the appointed professional. It offers that extra care and attention to detail that ultimately matters to most patients, if not all.*

The insight shared gave the author further ideas for improvement, one of which was to create a cancer email inbox, so patients could contact her directly as their main point of contact, rather than having to phone the practice and leave a message. Taking pre-treatment bloods is offered as a way of tracking patient progress, as well as making it easier and more convenient for the patient. The author also often phones the patient with their blood test results for post-treatment monitoring, for example the latest three-monthly PSA (prostate specific antigen) blood test result. This reduces anxiety levels in many patients, who otherwise would be waiting for their next hospital follow-up appointment to receive their results.

WHAT OTHER MACMILLAN CANCER SUPPORT RESOURCES ARE AVAILABLE TO GPNs?

Macmillan Cancer Support has a range of resources available to GPNs, including a new person-centred primary care e-learning programme,

available for all registered healthcare professionals working in a primary care setting.

The programme is designed to support professionals to implement and improve holistic needs assessment and/or CCR clinics, aiding the personalised care and support planning.

CONCLUSION

The crux of personalised care is about truly focusing on what matters to each individual and providing them with choice and control over their care. Support from primary care can help people manage a cancer diagnosis within the context of any other physical and mental health conditions they may have.

GPNs are well placed and possess the skills and knowledge to deliver improved experience of care for people living with cancer, but they need to be encouraged to develop their confidence to apply their transferrable skills and knowledge to cancer. **GPN**

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Resources...

To find out more about the person-centred primary care e-learning programme and the range of free education and training opportunities available, access the Macmillan Learning Hub: www.macmillan.org.uk/healthcare-professionals/macmillan-professionals/learning-and-development

Assessing children and young people's mental health

The mental health of children and young people (CYP) has markedly declined in recent years, a trend significantly accelerated by the Covid-19 pandemic. Accessing support for mental health issues is highly variable with long waiting lists for specialist child and adolescent mental health services (CAMHS) and inconsistent provision of mental health support in schools and educational institutions, meaning that supply does not meet demand. There is a gap in support for CYP who need a greater level of support than is currently available in education settings, but do not require specialist mental health treatment (King's Fund, 2024). Mental health issues may manifest as primary complaints in primary care settings or may be discovered incidentally during the evaluation of related physical or social problems. Consequently, it is imperative for general practice nurses (GPNs) to be able to recognise and accurately assess mental health issues that present to them. They should also be equipped to offer appropriate signposting, advice and guidance, as well as to facilitate necessary escalation or referral to specialist services when required. This article, the first in our series on CYP and mental health, focuses on history-taking and initial assessment.

KEY WORDS:

- Mental health
- Children and young people
- Assessment
- CAMHS
- Risk

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THE STATE OF CHILDREN AND YOUNG PEOPLE'S MENTAL HEALTH

There has been a palpable and quantified rise in the prevalence of mental health problems among children and young people (CYP), particularly since the Covid-19 pandemic. In 2023, approximately one in five CYP aged eight to 25 years had a probable mental health disorder, with 20.3% of eight to 16-year-olds, 23.3% of 17 to 19-year-olds, and 21.7% of 20 to 25-year-olds affected. Following an increase between 2017 and 2020, prevalence rates stabilised across all age groups from 2022 to 2023. Probable mental health disorder rates were similar for boys and girls aged eight to 16, whereas young women aged 17 to 25 had twice the rate compared to young men (NHS England, 2023; Children and Young People's Mental Health Coalition, 2024).

Socioeconomic factors significantly influence mental health, with children from low-income families more likely to have mental disorders. Bullying was more prevalent among those with mental disorders, and over half of young people expressed climate change concerns (NHS England, 2023; Children and Young People's Mental Health Coalition, 2024). Notably, eating disorders were identified in 12.5% of 17 to 19-year-olds, predominantly affecting young women (Newlove et al, 2022). This increase in mental health concerns has been reflected in attendances to primary care, with 83% of GPs reporting an increase in young patients with mental health difficulties in 2020 compared to 2019 (Bostock, 2020).

Despite this pattern of increasing concern, access to child and adolescent mental health services

(CAMHS) has been challenging. A poll by mental health charity stem4 of 1000 GPs revealed that 54% of CAMHS referrals for patients aged 11–18 are rejected, despite referrals being reserved for the most at-risk individuals. For those accepted, 27% wait three to six months, 28% up to 12 months (Bostock, 2020), and 10% over two years (King's Fund, 2024). Among CYP who have been referred to NHS mental health services, 32% were closed without treatment in 2021–2022 (King's Fund, 2024). In the author's clinical experience, many GPs struggle to refer rejected patients to alternative NHS services, often redirecting them to overwhelmed school or local charity services. This inadequate support structure has led to significant concerns about patient safety.

The NHS Long Term Plan's introduction of mental health support teams (MHSTs) aims to improve

coverage, yet significant gaps remain (NHS England, 2019). The expansion of MHSTs is promising, however, as of spring 2023, only 35% of schools had access to an MHST leaving a majority of pupils without access to early support (NHS England, 2024). Only 48% of the estimated 1.4 million children needing mental health support have received any NHS-funded mental health contact (De Souza, 2023). This data goes some way to explaining the increase in primary care contacts regarding CYP's mental health and the importance of increasing awareness in assessment and initial management in this area for general practice nurses (GPNs) and primary care staff.

ROLE OF GPNS IN CYP'S MENTAL HEALTH

Children and young people are regular users of healthcare services, with an estimated 60% of year 10 pupils (aged 14–15) reporting that they had visited the GP surgery within the last six months (Association for Young People's Health [AYPH], 2021). Primary care nurses are often the first point of contact for young patients and their families, and are a trusted and familiar member of the primary care team, providing a unique opportunity to identify mental health concerns early.

In terms of detection, primary care nurses utilise their interactions during routine visits to observe signs of mental distress. At times, mental health concerns may be openly shared by CYP or their families or may be the presenting complaint, such as the young person who attends for self-harm related wound management. At other times opportunistic detection is crucial, for instance:

- During contraception reviews
- If a child or young person shows non-compliance with medication
- If there are concerns about eating or weight which may indicate an eating disorder
- If there is a known mental health issue in a family member.

Where risk factors for poor mental health are known or disclosed (Public Health England [PHE],

2016), a more proactive approach to asking about mental health should be adopted. There are higher rates of mental health problems in marginalised groups including low-income families, children looked after, neurodiversity and special educational needs, LGBTQ+, Gypsy and Traveller communities, minoritised ethnic groups and those in the youth justice system (Children's Alliance, 2022).

“Primary care nurses are often the first point of contact for young patients and their families, and are a trusted and familiar member of the primary care team, providing a unique opportunity to identify mental health concerns early.

By building trusting relationships with young patients and their families, GPNs can create a safe environment for them to share concerns. This rapport is essential for encouraging children and adolescents to disclose their feelings and experiences.

In the author's clinical experience, when a potential issue is identified, GPNs play an important role in undertaking comprehensive assessment, including sensitive data gathering, measurement of vital parameters (especially in suspected eating disorders), and discussion with the multidisciplinary team (MDT). In the initial management phase, GPNs can provide support and interventions, such as psychoeducation of CYP and carers and sharing coping strategies to help manage mild-to-moderate mental health issues. GPNs are able to collaborate with GPs, school and community-based nurses, primary mental healthcare practitioners, and mental health specialists to interpret findings from assessments and determine the need for further evaluation or referral for specialised care.

GPNs also play a significant role in education and advocacy, both in individual consultations and in the increasingly popular group consultation. In the author's clinical experience, they educate patients and families about mental health conditions, treatment options and coping mechanisms, and help to reduce the stigma around accessing support for mental health.

ENSURING CYP HAVE ACCESS TO PRIMARY CARE SERVICES

The first step to enable CYP to seek assessment and support for their mental health by GPNs and other primary care staff, is to ensure that they are able to book appointments and access services appropriately. This means that staff need to be clear about when young people can access services on their own and that this information is made available to young people and their families (GOV.UK, 2023). With many GP surgeries moving to e-consultation or triage first approaches, there is a risk that CYP are unable to book in appointments or are barred by the online software from doing so owing to their age (parents or guardians need to complete eConsults for children aged six months up to 16 years of age). Thus, it is important that surgeries have mechanisms in place to allow adolescents to book themselves in if needed, and that it is recognised that some young people may need longer appointments, for example, if they have complex needs, disability or neurodiversity.

During an appointment, if an adolescent is with their parent or carer, they should be given an opportunity to speak alone with the healthcare professional. Mental health can be a sensitive subject and so it is important that any obstacles to accessing care are removed. Be clear on the guidelines surrounding confidentiality, including balancing between confidentiality and safeguarding or child protection responsibilities, as young people often need to be reassured about this before they are able to openly share any concerns. If any digital approaches are to be used, such as text messaging or online

prescriptions, ensure that the young person's contact details are up to date as many records will still have parental contact details as the default.

The 'you're welcome' standards (GOV.UK, 2023) provide comprehensive guidance, including self-assessment tools for ensuring that health services are youth friendly.

ASSESSING CYP'S MENTAL HEALTH

Assessing the mental health of a child or young person involves the following steps (Cowan, 2024a):

- History-taking
- Risk assessment
- Mental state examination (MSE).

History-taking

The key factors to elucidate in any mental health history are the severity, risk and functional impact of the condition, as these will be key in deciding the course of action to take. Many tools are available to aid in history-taking, including TRAM (Cowan, 2024b) (Table 1) and HEEADSSSS (Goldenring and Rosen, 2004) (Table 2). Additionally, incorporating a MSE and, in specific presentations such as eating disorders, a thorough physical examination, are crucial components of the assessment process.

Throughout the consultation, the tone and non-verbal communication of the healthcare professional will be key in helping to put CYP at ease. In the author's clinical experience, an empathetic, non-judgemental and respectful approach which shows unconditional positive regard is recommended. The OARS approach (open questions, affirmation, reflection, summaries), derived from motivational interviewing, can help to improve communication and elicit information (Figure 1) (Cowan, 2024b).

When exploring the presenting complaint, it is important to ask about mental health symptoms (such as low mood and anxiety), related physical symptoms (such as poor sleep, appetite, energy and concentration), and functional impairment, including school attendance and performance.

Open questions	Using questions beginning with 'what' 'how' or 'how come' — questions that cannot be answered with a simple yes/no answer will elicit as much information as possible
Affirmations	Recognising and acknowledging what is good or going well, highlighting the client's strengths, building rapport and client's confidence to change
Reflections	Providing a statement of understanding to promote empathy and acceptance
Summaries	Pulling together what the client has said to show that they are being heard and understood as well as ensuring correct understanding

FIGURE 1.
OARS approach (adapted from Regan and Burrell, 2021).

To differentiate between normal ups and downs of teenage life and a mental health problem, it is useful to consider the TRAM mnemonic (Cowan, 2024b; Table 1).

It is important to ask about the past medical history of mental health issues and medications, physical health history and any family history of mental health conditions.

Psychosocial factors are important contributors to CYP's mental health and the HEEADSSSS tool (Table 2) is a useful way to ask about this in a graduated fashion, with questions about risk-taking behaviours introduced in a step-wise fashion. This enables the history taker to get a holistic understanding of CYP's life, and is now available as an ARDENS template.

If particular concerns are uncovered, such as around substance abuse or eating disorders, other focused questionnaires can be considered. Where an eating disorder is being considered, the SCOFF screening questionnaire is useful (Morgan et al, 2000). However, it should be noted that this has not been designed for children so should not be relied upon, although it does provide useful information:

- Do you make yourself **Sick** because you feel uncomfortably full?
- Do you worry you have lost **Control** over how much you eat?
- Have you recently lost more than **One** stone in a three-month period?
- Do you believe yourself to be **Fat** when others say you are too thin?

- Would you say that **Food** dominates your life?

Where there are concerns about substance abuse, the CRAFFT screening tool can be considered (Figure 2). This is a free and validated tool which can be used in 12–21-year-olds to screen for the risk of substance use, including drugs, marijuana, smoking and vaping. It is available online at: <https://crafft.org>

Risk assessment

Risk assessment is a critical step in evaluation of any mental health presentation and should cover:

- Consider risk to self (including self-harm, suicide and eating disorders), risk to others and risk from others
- Specifically ask about self-harm and suicide. Research shows that this does not increase the chance of these behaviours and in fact can be protective
- Ask about protective factors (Cowan 2024b).

Table 3 outlines factors which increase risk and protective ones.

Detailed suicide risk assessment is beyond the scope of this article, however if any concerns are raised around self-harm, suicide or suicidal ideation, involvement of the named doctor or duty doctor is appropriate.

Where any risk is uncovered, a safety plan should be discussed with CYP. Safety planning is an essential component of managing child mental health concerns, particularly in cases involving suicidal ideation or self-harm. Collaborating with

children and their families to develop personalised safety plans, which outline triggers, coping strategies, support networks (both personal and professional), and crisis interventions, enhances safety and resilience during times of heightened risk (Nuij et al, 2021). Safety planning templates may be found online and can easily be incorporated into text messaging services, so that the discussion can be followed up with a written plan to be referred to when needed. The main components of a safety plan are:

- A discussion of triggers for self-harm, suicide or suicidal thoughts
- A record of who to talk to when experiencing these triggers — this includes both formal and informal support networks (family, friends and professionals)
- A plan about how to amend the environment to reduce risk, e.g. putting away sharps and ligatures, who will supervise the child and young person during times of high risk
- A plan about what to do if risk increases (crisis interventions). This will depend on local arrangements and may include calling the single point of access or crisis team, CAMHS duty worker, or going to accident and emergency if risks are acute.

Mental state examination (MSE)

In the author’s clinical opinion, a MSE is a key assessment tool for GPNs to evaluate a patient’s overall presentation. It can give useful clues as to the cognitive, emotional, and psychological health of the patient and can inform management and onward referral. While time limitations of general practice do not allow for a full formal MSE, it is important to note down the following points:

- Appearance and behaviour
 - Speech
 - Mood
 - Thoughts or formal thought disorders and perceptions
 - Insight and capacity: if no capacity, may need to consider Mental Health Act Risk
- (Cowan, 2024b).

The MSE starts with observing the patient’s physical appearance and behaviour, noting any unusual movements or expressions. Speech is

Table 1: TRAM mnemonic (Cowan, 2024b)

	Normal	Concerning
Transient	■ Comes and goes	■ Persistent over time
Reactive	■ Reactive to circumstances	■ Pervasive — symptoms are present in a variety of settings
Appropriate	■ Appropriate to the age and developmental stage	■ Unexplained or disproportionate in comparison to peer group
Manageable	■ Manageable and does not cause significant impairment	■ Disabling — causes significant suffering or impairment

Table 2: HEEADSSSSS mnemonic

H	Home life: who lives at home? What are the relationships like? Any significant changes?
E	Education and employment: going to school? Stress of exams/grades? Friendships and bullying
E	Unexplained or disproportionate in comparison to peer group
A	Activities and access to a supportive peer group
D	Drugs: do you, friends or family use tobacco, alcohol or drugs?
S	Sleep
S	Social media usage
S	Sex: previous or current relationship? Sexual orientation?
S	Self-harm and suicidality: mood, sadness, stress, previous or current thoughts? Medication? Deliberate self-harm (DSH)?
S	Safety: risk-taking behaviours and criminality, aware of any risk-taking? Violence at home or school?

Table 3: Risk formulation (Cowan, 2024b)

Factors which increase risk	Protective factors
Feelings around hopelessness	Internal resources
Thoughts about the future, e.g. suicidal ideation	External support
Behaviours such as self-harming, previous attempts or suicide plans	
Predisposing factors such as family history	
Precipitating factors including triggers	
Perpetuating factors including patterns of presentations	

assessed for clarity, pace, and volume. Mood and affect (i.e. patient’s facial expression or overall demeanour) are evaluated to gauge the patient’s emotional state. Thought processes are examined for coherence and content,

C	Have you ever ridden in a <i>car</i> driven by someone (including yourself) who was ‘high’ or had been using alcohol or drugs?
R	Do you ever use alcohol or drugs to <i>relax</i> , feel better about yourself, or fit in?
A	Do you ever use alcohol or drugs while you are by yourself, <i>alone</i> ?
F	Do you ever <i>forget</i> things you did while using alcohol or drugs?
F	Do your family or <i>friends</i> ever tell you that you should cut down on your drinking or drug use?
T	Have you ever got into <i>trouble</i> while you were using alcohol or drugs?

FIGURE 2. CRAFFT screening tool (<https://craftt.org/>).

identifying any delusions, obsessions, and hallucinations. It is useful to document any obvious concerns around cognitive functions, including orientation, memory, and attention. Lastly, insight and capacity are considered to determine the patient's awareness of their condition and their decision-making ability (Martin, 1990).

Physical examinations are not always required in mental health consultations. However, they are crucial when there are concerns about eating disorders and should include the following parameters:

- Weight and height
- Blood pressure and pulse (sitting and standing)
- Temperature
- Send for baseline blood tests at the same time as referral: full blood count (FBC), urea and electrolytes (U+Es), liver function test (LFT), glucose, erythrocyte sedimentation rate (ESR), thyroid function test (TFT), bone profile, calcium, magnesium — but do not delay referral waiting for results.

An excellent guideline from Healthy London Partnership for eating disorder assessments in

primary care is available at: www.transformationpartners.nhs.uk/wp-content/uploads/2020/02/Healthy-London-Partnership-Primary-Care-Guidelines-July-2021.pdf.

DECIDING ON WHEN REFERRAL IS NEEDED

Following assessment, including history-taking, risk assessment and examination, a formulation is made which is a comprehensive summary of a patient's psychological, biological, and social factors, providing a framework for understanding their mental health issues and guiding treatment planning.

Determining which cases warrant referral to CAMHS involves careful consideration of key factors. In the author's clinical opinion, the most important are:

- Severity
- Risk
- Functional impairment.

While some presentations (such as suicidality, active self-harm and psychosis) may necessitate urgent intervention from specialist services, others may be managed effectively

Red Flags

The following features are red flags and should be brought to the attention of the duty doctor or accident and emergency immediately:

- Not eating and fluid refusal for more than 24 hours
- Cardiovascular compromise and fainting
- BMI <13, under 0.2nd centile
- Blood pressure <0.4th centile
- Pulse <40bpm sitting and standing/postural drop
- Temperature <35C
- Weight loss >1kg a week for two consecutive weeks.

within primary care settings, schools, or in the voluntary, community and social enterprise (VCSE) sector with appropriate support and interventions. Where cases are not clear cut, it is often useful to discuss patients with the GP or in a MDT meeting to discern the most suitable course of action based on the individual needs and circumstances of the young person. *Table 4* is provided as a guide only.

Optimising CAMHS referral

If a referral to CAMHS is required, it is crucial to ensure that it includes key pieces of information to improve the chances of it being accepted and triaged appropriately (as urgent/routine). The referral should include a comprehensive description of the child's difficulties, functional impairments, and associated risks. Providing detailed descriptions, any collaborating reports from school, family or other professionals involved and MSE findings will help timely access to appropriate interventions. The author recommends that the following are included in referrals:

- Detailed description of the difficulties and how long they have been present
- Functional impairments or difficulties these are causing (e.g. school attendance). Consider a HEEADSSSS assessment
- A brief MSE, speak to the child directly (ideally face-to-face). This adds helpful information which enables to triage the referral more effectively

Table 4: Guide for referral and seeking support (author's own work)

Action	Explanation
Refer urgently to CAMHS and discuss with duty clinician	■ Suicidality ■ Active or increasing self-harm behaviours ■ Psychosis ■ Suspected eating disorders (see <i>red flags</i>)
Routine referral to CAMHS and continue to provide support in the meantime	■ Suspected eating disorders without <i>red flags</i> ■ Suspected neurodevelopmental disorder ■ Persistent anxiety or low mood where there is functional impairment or risk behaviours ■ Suspected obsessive compulsive disorder (OCD), post-traumatic stress disorder (PTSD), bipolar disorder ■ Established health anxiety ■ Complex interpersonal challenges ■ Historical or current experiences of abuse or violence (+ safeguarding referral)
Consider school-based support, watchful waiting and self-help or signposting to charities and other services	■ Low mood or anxiety which is not affecting functioning and where there is no risk behaviour ■ Stress management ■ Sleep problems ■ Behavioural or conduct difficulties with no mental health comorbidity ■ Anger management ■ Low self-esteem ■ Mild health anxiety ■ Assertiveness/interpersonal challenges with peers ■ Bereavement ■ Relationship problems

- A risk assessment — risk to themselves (suicide, self-harm risk), to others and from others
- If risk/suicidal ideation is involved, state if you have discussed a safety plan with the young person and family
- Information about what has been tried already (by parents, schools, other services) and if it has or has not worked
- Consent for referral from the young person and family, and a willingness to engage with CAMHS
- Attach any previous letters or reports of specialist assessments (e.g. emergency psychiatry [EP] occupational therapy [OT], speech and language therapy [SALT], etc)
- If social care is involved, details of the allocated social worker.

CONCLUSION

This article has summarised the current state of CYP's mental health in the UK and the role that GPNs play in the assessment and initial management of mental health presentations. Many children and young people will not meet CAMHS referral criteria or will face a long wait until they are seen. The next article in this series will outline techniques, including psychoeducation, self-help, and grounding techniques and cognitive behavioural therapy (CBT) based techniques that can be used by GPNs to provide support to this group. **GPN**

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Key points

- The mental health of children and young people (CYP) has markedly declined in recent years.
- Mental health issues may manifest as primary complaints in primary care settings or may be discovered incidentally during the evaluation of related physical or social problems.
- It is imperative for GPNs to be able to recognise and accurately assess mental health issues that present to them.
- Mental health can be a sensitive subject and so it is important that any obstacles to accessing care are removed.

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Pernicious anaemia: what GPNs should know

Pernicious anaemia is a rare condition which is classed as an autoimmune disease. It is most frequently diagnosed in those over the age of 60, but can occur at any age. It presents with variable symptoms, many of which are shared with those of other diseases, making the condition difficult to diagnose, leading to missed diagnosis and a greater risk of complications. This article gives an overview of its diagnosis, management, and complications, with the aim of helping general practice nurses (GPNs) and non-medical prescribers recognise symptoms and get early treatment, reducing the risk of long-term adverse effects and improving quality of life for all those affected by this complex disease.

KEY WORDS:

- Pernicious anaemia
- Signs and symptoms
- Risk factors
- Treatment and management
- Complications

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Photograph: Babul Hosen/Shutterstock

Pernicious anaemia (PA), also called megaloblastic anaemia, is a complex, rare condition which is classed as an autoimmune disease. It can affect people of all ages and occurs in countries all over the world. However, despite advances in the understanding of this disease, making the diagnosis can be challenging for clinicians due to its complexity, and confirming the exact cause for patients' symptoms can be difficult. Misdiagnosis can lead to delayed diagnosis which may subsequently cause the development of serious complications (National Institute for Health and Care Excellence [NICE], 2021). This article gives general practice nurses (GPNs) and non-medical prescribers an overview of the disease in order to make recognition, diagnosis, and management easier for those faced with assessing patients presenting with symptoms of this complex condition.

PREVALENCE

The problem is estimated to affect between 50 and 200 per 100,000

people in the UK and 150 per 100,000 people in the US (Mohamed, 2020). Prevalence varies geographically and the mean age of onset differs among ethnic groups — estimated at 60 years of age in white people and approximately 50 years in black people, with a bimodal distribution due to an increased occurrence in young black females (NICE, 2024), and a lower incidence in those of Asian descent compared to other study populations (Stabler, 2013).

PATHOPHYSIOLOGY

The underlying processes leading to PA are complex and involve multiple pathways. The condition frequently develops secondary to vitamin B12 (cobalamin) or much less often, folate deficiency (Torrez et al, 2022). In most cases, the primary mechanism in the development of the disease is a vitamin B12 deficiency caused by a deficit in the production of the intrinsic factor normally produced by gastric parietal cells. Folate deficiency is most frequently caused by poor diet in the elderly, with drug users and alcoholics

also at greater risk. That said, it is a rare problem due to fortification of foods with added vitamins and minerals (Torrez et al, 2022).

Folate and B12 deficiency are linked in a complex pathway in which B12 deficiency disrupts the normal folate cycle and regeneration of methylene-tetrahydrofolate (required to sustain synthesis of thymidine for DNA replication), so that folate becomes trapped as methyl folate, creating a folate deficiency (Green, 2017). In health, intrinsic factor (IF) is produced and secreted by parietal cells and binds to B12 facilitating its transport to the terminal ileum for absorption. However, anti IF antibodies stop the formation of a B12/IF complex, preventing intestinal absorption (Vaqaar and Shackleford, 2023). The deficiency of IF is a consequence of the presence of atrophic body gastritis (ABG), which results in the destruction of the mucosa, and thus the loss of parietal cells which normally produce chlorohydric acid as well as IF (Lahner and Annibale, 2009).

Vitamin B12 is normally consumed from eating meat, dairy products and eggs and has an essential role in the production of red blood cells (erythropoiesis) and the formation of myelin sheaths (myelination) (Kumar et al, 2023). Depletion of body B12 stores resulting from insufficient capture of the vitamin from dietary sources eventually leads to a state of deficiency, and when a certain threshold of deficiency is reached, the supply of B12 becomes inadequate to support biochemical pathways requiring the vitamin, leading to disruption of the functional pathway, and ultimately affecting the structural integrity of cells (Green, 2017). While there is development of megaloblastic anaemia and changes to all blood cells, erythrocytes show the most significant changes, with the degree of anaemia corresponding to the severity of red cell changes (Green, 2017).

RISK FACTORS

Susceptibility to PA appears to be genetically determined, although the mode of inheritance remains unknown. However, current evidence for the role of genetic factors includes familial history of PA and its association with other autoimmune diseases (Andres and Serraj, 2012). The confirmed association with autoimmune disorders, such as autoimmune thyroiditis, Addison's disease, vitiligo, and type 1 diabetes, a personal or family history of these conditions therefore increases the likelihood of developing PA (Mohamed, 2020). Long-standing *Helicobacter pylori* infection has also been indicated as possibly playing a role in many patients with PA, in whom the active infectious process has been gradually replaced by an autoimmune disease that terminates

Red Flags

- PA is classed as an autoimmune disease
- Mean age of onset differs across ethnic groups
- Most common in those aged 60 in white populations and 50 in black patients
- Less common among those of Asian descent.

Table 1: Other causes of B12 deficiency (NICE, 2024)	
Cause of B12 deficiency	Additional information
Gastric causes	Examples include gastric resection or gastrectomy, <i>helicobacter pylori</i> (Pylori) infection, atrophic gastritis
Intestinal causes	B12 deficiency may be caused by Crohn's disease affecting the ileum, human immunodeficiency virus (HIV) and any radiotherapy affecting the ileum, ileal resection or malabsorption
Inadequate dietary intake	Vegan diet
Drugs	Colchicine, metformin, and anticonvulsants
Long-term use of medications affecting gastric acid production	H2 receptor antagonists and proton pump inhibitors can worsen deficiency because gastric acid is necessary for the release of B12 bound to protein ingested from food

in a burned-out infection and the irreversible destruction of the gastric body mucosa (Lahner and Annibale, 2009).

PA accounts for approximately 80% of cases of megaloblastic anaemia due to impaired absorption of B12 (NICE, 2021). B12 deficiency has many other causes (Table 1).

SIGNS AND SYMPTOMS

Clinical presentation is often insidious and the onset and progression of the disease is slow. As a consequence, patients often are not aware their symptoms are related to anaemia, because over time they have become used to them (Lahner and Annibale, 2009). The disease develops gradually with a progression time of two to five years, and warning signs may not become apparent until the degree of anaemia is profound (Carmel, 2008).

Patients may present with a range of symptoms, some of which may be confused with other conditions, leading to a delay in diagnosis. Patients will often seek advice having noticed an increased feeling of tiredness and fatigue, breathlessness, palpitations, and they will be pale on clinical examination. In addition, there may be mouth ulcers and a sore, red tongue (glossitis) (NICE, 2024). Other signs reported include:

- Dyspeptic symptoms
- Epigastric discomfort
- Postprandial bloating and fullness
- Early satiety
- Skin may have an abnormal yellow tinge caused by an elevation in bilirubin level manifesting itself as jaundice

(Ammouri et al, 2020).

Involvement of small bowel epithelium may result in malabsorption. Diarrhoea with weight loss and anorexia can be additional complaints (Ammouri et al, 2020). Rare signs and symptoms are shown in Table 2.

INVESTIGATIONS

There is no test to confirm the diagnosis of PA and some of the available tests are non-specific, and others (e.g. homocysteine and plasma methylmalonic acid) are not available in all areas. The diagnosis therefore generally relies on the presentation of megaloblastic anaemia, low serum vitamin B12 levels, and the presence of antibodies to gastric parietal cell or IF (Ammouri et al, 2020). A range of investigations are often needed to assist in making the diagnosis. These are as follows (Devalia et al, 2014):

- **Full blood count (FBC) and blood film:** hypersegmented neutrophils may suggest either B12 or folate deficiency but are not sensitive or specific in early B12 deficiency. Typically, B12 deficiency can cause oval macrocytes in addition to hypersegmented neutrophils and megaloblastic change in the bone marrow, but a raised mean corpuscular volume (MCV) is not a specific indicator of B12 deficiency
- **Bilirubin:** plasma unconjugated bilirubin levels may rise because of an increased destruction of precursors to red blood cell formation in the bone marrow. Liver function tests (LFTs), thyroid function tests (TFTs), and protein electrophoreses (a test used to measure specific proteins in the blood), may be helpful in

evaluation if a differential diagnosis is suspected. See *Table 3*

- **Serum B12 (cobalamin) levels:** this test is commonly used but can be affected by many factors, including diet, pregnancy, vitamin supplements, metformin, and the contraceptive pill. An isolated serum cobalamin level has poor sensitivity and specificity for reliably detecting B12 deficiency, defined by a serum cobalamin level of <200ng/L. However, some patients with PA and serum cobalamin levels $\geq 200\text{ng/L}$ may have true B12 deficiency because levels can be falsely elevated in up to 35% of these patients (Htut et al, 2021). Other limitations of currently available tests for B12 are shown in *Table 4*
- **Anti-intrinsic factor antibody (IFAB):** a low total serum cobalamin level may be further evaluated by testing for anti-IFAB, which if positive, has a high positive predictive value (95%) for the presence of PA, and a low false positive rate (1–2%), and therefore a high specificity (Ammouri et al, 2020). IFAB is positive in 40–60% of cases and is useful for identifying those patients who will need lifelong cobalamin replacement therapy (Ammouri et al, 2020). Although the presence of IF antibodies is diagnostic of PA, a negative result does not exclude the disease due to the test's low specificity
- **Gastric anti-parietal cell antibodies:** these are positive in 90% of patients with PA, but are also positive in 10% of the general population and are therefore regarded as having a low specificity for PA, so in these cases a negative result makes PA unlikely (Lahner et al, 2009)

- **Bone marrow aspiration:** bone marrow aspiration may be useful to exclude or confirm a differential diagnosis.

TREATMENT AND MANAGEMENT

PA is treated with hydroxocobalamin given by intramuscular injection, 1mg, three times a week for two weeks and then 1mg every two to three months for life (NICE, 2024). If folate deficiency is present, oral folic acid 5mg is usually prescribed for four months but may be needed for longer if the problem persists (NICE, 2024). Normalisation of serum cobalamin levels usually occurs within two weeks, and correction of macrocytosis usually takes place during the first month following initiation of treatment (Ammouri et al, 2020). Once treatment is started, it will be continued for the duration of the person's life.

REFERRAL

Referral may be needed if the underlying cause of either B12 or folate deficiency remains uncertain despite investigations, or if the person has a poor response to treatment. If haematological malignancy is suspected, urgent referral on a two-week wait is needed to a haematologist or a gastroenterologist if there are gastrointestinal symptoms and gastric carcinoma is suspected (NICE, 2024). If poor diet is thought to be a cause, referral to a dietician for specialist advice may be needed.

COMPLICATIONS

There are several complications which can arise because of severe vitamin B12 deficiency. Severe anaemia increases the risk of cardiac complications, such as heart failure, especially in older adults. In addition, vitamin B12 deficiency can lead to serious neurologic complications including peripheral neuropathy, bilateral cerebral dysfunction, optic neuropathy, memory loss, personality changes, impaired recall, and subacute combined degeneration of the spinal cord (NICE, 2024). Subacute combined degeneration is a rapidly progressive myelopathy, causing damage to the myelin sheath, which can be associated with profound neurologic deficits including progressive sensory

Red Flags

- Symptoms develop slowly over two to five years
- Some are shared with other conditions making diagnosis difficult
- There is no specific test to confirm the diagnosis
- Several investigations may be needed and some of the tests may not be available in all areas.

abnormalities, ascending paraesthesia, weakness, ataxia, loss of sphincter control, and gait impairment (Vasconcelos et al, 2006).

Recent years have also seen increased interest in the possibility that patients with PA have an even greater risk of developing gastric cancer. A systematic review concluded that patients living with the condition have an estimated seven-fold relative risk of developing this disease, however the authors suggested further studies were needed to clarify this (Vanelli et al, 2012). Perhaps more worrying are findings from a population-based case control study conducted among elderly US citizens with PA, which reported an increased incidence in cancers at various sites (Murphy et al, 2015). Cancer types included oesophageal, small intestine, and liver, with significant associations reported between risk of myeloma, myeloid leukaemia, myelodysplastic syndrome among study participants with known PA (Murphy et al, 2015).

PROGNOSIS

For many conditions, the long-term outlook is difficult to predict, but for PA, with prompt diagnosis and treatment, prognosis is usually good except for patients diagnosed with subacute degeneration of the spinal cord, as although B12 treatment stops progression and improves neurologic deficits in most patients, evidence shows complete resolution only occurs in a small percentage (Vasconcelos et al, 2006). After treatment initiation, neurological symptom improvement is typically slower than haematological improvement, and the degree of neurological recovery is inversely

Table 2: Rare clinical manifestations of B12 deficiency (Andres and Serraj, 2012)

■ Cranial nerve impairment
■ Dementia
■ Parkinsonism
■ Memory impairments
■ Atherosclerosis
■ Cerebellar syndrome (causing altered balance and gait)

Table 3: Differential diagnosis (Stabler, 2013; NICE, 2024)

Differential diagnosis	Additional information
Hypoplastic anaemia	Characterised by impaired production of red blood cells in the bone marrow
Myelodysplastic syndrome	A type of blood cancer. Bone marrow makes abnormal blood cells
Aplastic anaemia	A rare condition where the bone marrow fails to produce adequate new blood cells
Liver disease	Chronic liver disease causes anaemia that is mildly macrocytic
Alcohol abuse	May cause macrocytosis and is the most frequent cause of raised mean corpuscular volume (MCV)
Drugs	Methotrexate, azathioprine, and acyclovir can cause macrocytic anaemia
Severe thyroid deficiency	Can cause macrocytic anaemia but MCV falls once treatment is started

Table 4: Limitations of B12 testing (Knott, 2021)

■ Clinically normal levels for cobalamin are not clear
■ Values vary between laboratories
■ Elderly may have low serum cobalamin levels in the absence of anaemia or macrocytosis and cobalamin levels may be normal in the presence of significant B12 deficiency
■ Cobalamin levels are not easily correlated with clinical symptoms

proportional to the severity and duration of symptoms before treatment (Vaqar and Shackleford, 2023).

MONITORING

Monitoring of patients is advised to verify the onset of new symptoms that are suspicious of long-term consequences of the disease, such as dysphagia, epigastric pain, dyspeptic symptoms, loss of body weight, and/or iron-deficiency. If evident, an urgent referral on a two-week wait to exclude or confirm a diagnosis of gastric carcinoma is needed (Lahner and Annibale, 2009).

CONCLUSION

PA is a rare disease which results in vitamin B12 deficiency and megaloblastic anaemia. Despite an improved understanding of the condition, it remains complex and making a diagnosis is a challenge for clinicians because of the variable symptoms and presenting features, as well as the range of tests needed to confirm the diagnosis. Due to difficulties often encountered when assessing patients presenting with symptoms, a delay in confirming

the underlying cause is possible, leading to the risk of complications. The insidious onset and confusing array of symptoms, some of which are shared with other conditions, further complicates matters. Early diagnosis and treatment are needed to improve outcomes and reduce the risk of complications. It is hoped that this article has given GPNs and non-medical prescribers an insight into this complex disease, with the aim of improving knowledge and confidence when faced with assessing patients presenting with symptoms of this disease. **GPN**

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Red Flags

- Referral may be needed if the diagnosis is uncertain or an alternative cause for symptoms is suspected
- Early diagnosis reduces risk of complications
- Once diagnosis is confirmed, B12 supplementation is lifelong.

Can GPNs stop leg ulcers in their tracks?

The role of general practice nurses (GPNs) in providing immediate and necessary care for lower leg wounds was the focus of a recent webinar hosted by the Legs Matter coalition and the Royal College of Nursing (RCN) General Practice Nursing Forum committee. Here, Katy Smyth, academy teacher at Accelerate CIC and chair of the RCN GPN Forum, explains the focus of the event and why it is important to raise awareness of this topic within primary care.

KEY WORDS:

- Leg ulcers
- Compression therapy
- General practice nurses
- Guidelines
- Red flags

- Compression acts to reverse the effects of gravity on the lower limb and promotes wound healing.
- Mild compression (<20mmHg) is indicated in first-line treatment of lower limb wounds.
- An ABPI is not required for early intervention with mild compression (in the absence of red flag symptoms/conditions).
- Arrange for a comprehensive, holistic assessment including ABPI to be undertaken within 14 days, where non-healing is observed.
- GPNs have immense value in prevention and early intervention to Make Every Contact Count.

Research over the past 10 years highlights the wound care crisis and the economic and personal costs (Guest et al, 2015; 2018; 2020; 2023). £8.3 billion pounds per year is spent on wound management, of which £2.7 billion is associated with managing healed wounds and £5.6 billion is associated with managing unhealed wounds (Guest et al, 2020). In terms of practitioner time, this equates to 54.4 million district or community nurse visits per year, 28.1 million general practice nurse (GPN) appointments and 53.6 million healthcare support worker visits (Guest et al, 2020).

Wound care is a core activity impacting on patient quality of life and healthcare resources. In terms of venous leg ulcers, every year over 200,000 people seek medical help, however, these numbers are likely underestimated (Guest et al, 2018). Evidence highlights variability and inequity in accessing leg ulcer services (Gray, 2018). Suboptimal patient outcomes could be prevented with early intervention within primary care. Very often, by the time patients present to district nursing or community services, they have already developed a leg ulcer which may have been prevented in a general practice setting. GPNs are ideally placed to prevent and treat progression of venous disease, halt leg ulceration, and play a significant role in improving patient outcomes.

Prevention is a key driver within the *NHS Long Term Plan* (NHS England, 2019), yet it is often omitted in wound management. Venous disease is a long-term condition for some, but is often not viewed or treated as such in terms of the lower limb (All-Party Parliamentary Group on Vascular and Venous Disease, 2019). Venous

disease is the most common cause of leg ulceration, causing around 70% of all non-healing lower leg wounds (Vascular Society of Great Britain and Ireland, 2018). Research suggests that the number of new leg ulcers is rising due to an ageing and increasingly overweight population (Guest et al, 2018). The burden that venous leg ulcers pose to the NHS is significant. Appropriate and timely treatment leads to improved quality of life and substantial healthcare savings. GPNs have immense value in prevention and early intervention to Make Every Contact Count (MECC) (Ritchie, 2021).

All of us are subject to gravity constantly pulling fluid to the lowest part of the body — the legs and the feet. Fundamentally, if you sustain a cut to your leg and arm, the arm is much more likely to heal, as it is less susceptible to gravity. According to Partsch and Mortimer (2015), gravity is the prominent underlying reason why most ulcer wounds are located on the lower legs (*Figure 1*). Compression counteracting gravity is therefore the most reasonable basic treatment for managing leg wounds.

Something that can start off as a traumatic superficial wound, such as a graze on the leg from the garden or catching the leg on a shopping trolley, should normally heal. However, due to the impact of gravity and previously undiagnosed venous disease caused by a range of risk factors (listed in *Box 1*), it can



Webinar...

To view the Legs Matter and RCN GPN webinar, visit: <https://legsmatter.org/whats-new/can-gpns-stop-leg-ulcers-in-their-tracks/>

result in lower limb ulceration for the following reasons:

- Long-term venous damage means that the valves are not as effective. This valve incompetence, which often is undetected until it presents as varicose veins, can be due to factors such as occupation, where the person has been required to stand for long periods, or obesity
- Damage to the venous system through medical episodes such as deep vein thrombosis (DVT) can affect venous return and manifest years after the event
- Inability of the calf and foot muscle pumps to effectively empty the veins causing venous hypertension and oedema. This may be due to reduced mobility associated with age or comorbidities
- Damage to the circulatory system, lymphatics, ankle mobility or gait caused by surgery can result in venous insufficiency

(Mitchell, 2024).

The above points lead to an increase in pressure which builds up in the venous system over time, causing impaired blood flow and a trajectory of pathophysiology, such as:

- Damaged veins
- Backflow to the superficial veins
- High pressure

Box 1

Risk factors affecting venous and lymphatic return

- History of varicose veins
- Deep vein thrombosis (DVT)
- Immobility
- Fixed ankle/reduced ankle range of motion
- Reduced calf muscle pump
- Musculoskeletal injuries
- Obesity
- Increased age
- Occupation — prolonged sitting/standing
- Comorbidities
- Previous surgery to the abdomen or lower limbs such as total knee replacement.

(This list is not exhaustive)

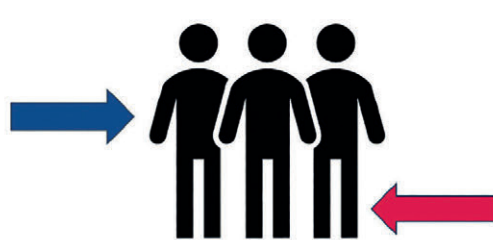


FIGURE 1.

Impact of gravity on the lower limb.

- Dilation of vessels
 - Leakage of blood products into the tissues and skin
 - Staining, oedema and inflammation
 - Eczema, hyperkeratosis and ulceration
- (Staines and Mitchell, 2024).

“In 2020, the National Wound Care Strategy Programme (NWCSP) published guidance on ‘immediate and necessary care’ which, when instigated early, may prevent wounds on the lower limb from deteriorating into a venous leg ulcer or in some circumstances, aid healing.

Compression therapy is an evidence-based treatment that can reverse increased pressure and support healthy muscle movement by applying additional support on the outside of the skin (Ritchie, 2024). Where there is venous hypertension, the limb sits in a cycle of inflammation. Compression therapy has anti-inflammatory properties which switch off this inflammation (Bjork and Ehmann, 2019). Compression has several therapeutic effects (Box 2). In terms of prevention, compression can be likened to a vaccine against venous leg ulcers.

In 2020, the National Wound Care Strategy Programme (NWCSP) published guidance on ‘immediate and necessary care’ which, when instigated early, may prevent wounds on the lower limb from deteriorating into a venous leg ulcer or in some

circumstances, aid healing. As part of the early intervention strategy, patients may safely access mild compression (<20mmHg) without an ankle brachial pressure index (ABPI) reading in the absence of red flags. This should be considered first-line treatment for people who have one or more wounds below the knee and not on the foot (NWCSP, 2020).

Despite this guidance being published four years ago, it is still slow to be fully implemented within services. The recommendation for wounds that are non-healing (or at risk of non-healing) to be treated with mild compression is based on clinical expert consensus that, providing people with ‘red flag’ symptoms are excluded, the benefits of first-line mild compression outweigh the risks, even for people without obvious signs of venous insufficiency (NWCSP, 2020). In the author’s clinical opinion, through following the NWCSP guidance, GPNs can prevent new wounds presenting on the leg today from becoming the leg ulcers of tomorrow. A key point here is that leg wounds should not reach 14 days before any assessment or intervention, when there is an opportunity to create stability and slow deterioration.

Due to the documented barriers in attaining an ABPI in many generalist settings (Guest et al, 2018), use of mild compression (<20mmHg) using a British Standard (BS) class 1 stocking may be sufficient to start the healing process for lower limb wounds or prevent further deterioration. However, in a proportion of individuals, the underlying venous disease will be so severe that strong compression is required to heal the wound. If the lower limb wound does not show signs of healing within the first 14 days, or any deterioration is noted in

Box 2 Therapeutic effects of compression

- Compression therapy causes changes to the haemodynamic and lymphatic systems
- It applies external pressure to the skin and underlying structures to counteract the force of gravity (squeeze)
- It acts on the veins to improve valve function and increases blood velocity
- It reduces oedema — improves movement of fluid from the interstitial spaces
- It improves skin function
- It has anti-inflammatory properties — switches off chronic inflammation (Bjork and Ehmann, 2019).

this time frame (Figure 2), the patient should be referred for a full holistic assessment including an ABPI as advocated by the NWCSP (2024). More urgency may be required for some patients, for example, those with recurrent ulceration, severe oedema, limb distortion or a high volume of exudate (Wounds UK, 2022). A full lower limb holistic assessment is the route to patients accessing higher doses of compression therapy, which is the recommended standard of treatment for venous leg ulcers if non-healing (Ritchie, 2024).

So, how can GPNs safely employ early intervention with mild compression without an ABPI? The answer is to undertake a red flag assessment (see *Red flags* box for further information). Those without red flag symptoms and at low risk of pressure damage over bony prominences should be offered first-line mild graduated compression (<20mmHg at the ankle). Those with red flag symptoms should not be offered compression as part of immediate and necessary care and should receive urgent referral for treatment (NWCSP, 2024). Once satisfied that the patient has no red flag symptoms or conditions, it is important to assess that blood is circulating through the arteries and the limb is adequately perfused.

Checking capillary refill time in the toes is a good indicator of a patient's peripheral perfusion. A capillary refill check should be completed distally on the tips of the toes by pressing firmly for five seconds and timing how long it

“ So, how can GPNs safely employ early intervention with mild compression without an ABPI? The answer is to undertake a red flag assessment.

takes the toe to regain its original colour. This would be expected to be under three seconds in a well-perfused limb (Staines and Mitchell, 2024). It is also important to assess the temperature of the skin, colour, and for any pressure areas over bony prominences. If there are any concerns, refer on using local pathways.

Before applying compression, it also important to consider if the patient has intact sensation in their feet and check for signs of neuropathy. Where there is a loss of sensation, the patient may

not be aware if the compression stocking rubs causing damage, so the application of BS class 1 hosiery stockings is not advocated. Similarly, in cases where the leg is an unusual shape, has deep skin folds, or if there is a large amount of oedema, BS class 1 hosiery stockings are not appropriate. The material of the stocking is thin and elastic, with low stiffness and they are not designed to support large amounts of swelling and are likely to dig into the tissue and create further problems. Additionally, there is a need to consider if it is safe to apply compression for any other reasons, such as severe or unstable cardiac failure, or an inability to report difficulties, for example, those with cognitive decline such as dementia (Ritchie, 2024).

Once satisfied that the patient is suitable for early intervention with compression, it is important to select compression hosiery which can safely be applied without an ABPI. Compression hosiery comes in a range of levels from mild to very strong (Table 1). These levels are called classes. Internationally, there are three main specifications of compression used: British, French, and German standard (Wounds UK, 2021). For early intervention and immediate and necessary care, application of mild compression is usually achieved through a BS class 1 hosiery stocking. The analogy of a BS class 1 compression stocking to a brown steroid inhaler can be beneficial, as they both act as preventors. In the lungs, the inhaler prevents inflammation and asthma

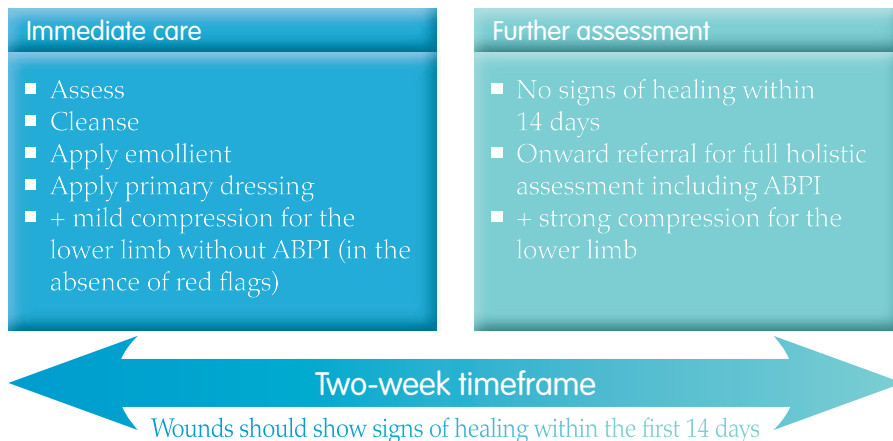


FIGURE 2. Timeline of treatment (adapted from NWCSP, 2024).

Red flag symptoms/conditions

Do not compress/assess/refer

- Acute infection of leg or foot (e.g. increasing unilateral redness, swelling, pain, pus, heat)
- Symptoms of sepsis
- Acute or chronic limb threatening ischaemia
- Suspected acute DVT
- Suspected skin cancer
- Bleeding varicose veins.
- Treat suspected infection in line with National Institute for Health and Care Excellence (NICE, 2020) antimicrobial guidelines
- Immediately escalate to relevant clinical specialist
- For people in the last few weeks of life, seek input from their other clinicians to agree an appropriate care plan (adapted from NWCSP, 2024).

symptoms, and in the lower leg, the compression prevents wounds and symptoms such as oedema and discomfort from developing.

Measuring for a BS class 1 compression garment is relatively simple. Many brands require the same measurements, however, check the company requirements as these can vary. It is useful to confirm which products are listed on your local formulary. Measurements can be taken seated or standing with feet flat on the floor. However, try to measure your patients in the same position for consistency. To start, check the circumference of the ankle: this measurement should be taken just above the malleolus, where the ankle is slimmest. The next measurement is the circumference of the widest part of

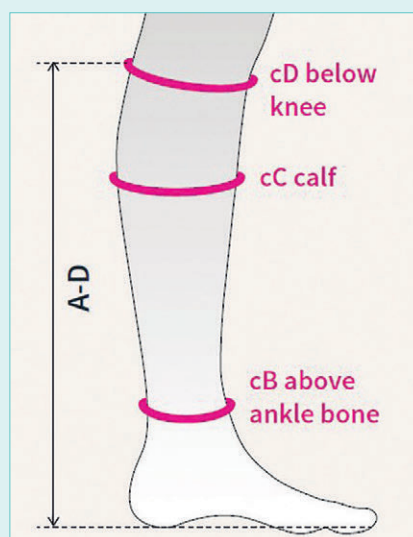


FIGURE 3.

How to measure for BS class 1 below-knee hosiery. Image used with permission of medi UK.

- Narrowest part of the leg above the ankle
- Thickest part of the calf
- Length from heel base to where the garment should finish — below knee or top of thigh
- Foot length: toe to heel if closed toe
- Check manufacturer as brands do vary
- Take measurements directly against the skin to ensure accuracy
- All measurements should be in centimetres
- Measure both limbs.

“... patients who do not receive prompt diagnosis and treatment are at risk of deteriorating lower leg conditions, which can have significant consequences — physically, socially and emotionally.

the calf. To ensure the correct length, a measurement should be taken from the floor to where the garment should finish, just below the knee. In addition, some manufacturers will request the foot length, from the back of the heel to the longest toe. Take the measurements for both legs as they may differ in size (Figure 3).

Patients should be prescribed a minimum of two pairs of medical BS class 1 compression hosiery (one to wear and one to wash), every three months, to ensure the effectiveness

of compression (Wounds UK, 2021). It is recommended that patients wear the medical compression throughout the day and remove at night. They can then note any skin changes, perform personal hygiene routines and apply emollient to moisturise their legs. Some paraffin-based ointments can cause the elastic in the hosiery to deteriorate more rapidly, so water-based creams are preferable. In terms of hosiery care, ensure it is washed according to the manufacturer's guidelines. Further detailed information on hosiery application, removal and care can be found in the Wounds UK best practice statement (2021).

In the author's clinical opinion, patients who do not receive treatment as per the NWCSP guidelines are at much greater risk of harm. This is usually harm through omission, which can be devastating to patients and families. Indeed, patients who do not receive prompt diagnosis and treatment are at risk of deteriorating lower leg conditions, which can have significant consequences — physically, socially and emotionally.

Can GPNs stop leg ulcers in their tracks? The answer is yes they can!

The joint webinar hosted by the Legs Matter coalition and the RCN General Practice Nursing Forum

Table 1: Classes and standards of medical compression hosiery (adapted from Wounds UK, 2021)

	British Standard	French Standard	German Standard
Class 1	14–17mmHg	10–15mmHg	18–21mmHg
Class 2	18–24mmHg	15–20mmHg	23–32mmHg
Class 3	25–35mmHg	20–36mmHg	34–46mmHg
Class 4	Not available	>36mmHg	>49mmHg

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highlighted the specific issues that community nurses encounter with lower leg wounds and the frequent deterioration to leg ulcers. Raising awareness on the impact of gravity on the lower limb and immediate and necessary care (NWCS, 2024), should result in increased practitioner confidence in the use of compression hosiery to prevent and manage wounds in partnership with patients.

The webinar attracted over 220 attendees and received positive feedback, evidencing interest in the topic area and the need to further raise awareness. The RCN GPN Forum is in the process of developing an electronic resource which will support GPNs in developing their knowledge base and confidence with early intervention. **GPN**

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