

Is it too late to fix social care?

RCN and C the Signs

Why we need a concerted plan for COPD care

General practice nursing cannot remain
the shock absorber of primary care

Working to advance prevention
and reduce alcohol harm

Role of zinc paste bandages in practice

Urinary incontinence in postmenopausal women

Primary malignant brain cancers

Acne in teenagers

Meningitis, meningococcal meningitis
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Infection prevention and control
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Editor-in-chief

Jaqui Walker, advanced general practice nurse, Forth Valley; academic assessor, NES GPN pathway

Editor/publisher

Binkie Mais
binkie@jcn.co.uk

Events and business manager

Georgina Holder
georgina@jcn.co.uk
07946 421654

© Wound Care People Limited 2026
Unit G, Wixford Park, George's Elm Lane, Bidford on Avon, Alcester B50 4JS

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t: +44(0) 1789 582000
e: binkie@jcn.co.uk
w: www.gpnursing.com

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GPNs: valued, visible and vital



Wonderful to read the article from Steph Lawrence MBE, chief executive, Queen's Institute of Community Nursing, who has not only articulated so clearly the complexity, centrality and importance of the GPN role, but also highlighted the experienced and yet ageing workforce and the potential issues attracting the next generations into general practice nursing. I love my job and the way it has grown over many years.

Chatting with colleagues I see that they too enjoy portfolio careers with opportunities within education, quality improvement and leadership, as well as firmly grounded frontline clinical work. For many, their career path developed over decades, constantly adapting, upskilling and responding to practice population and service needs. They have varied exciting portfolio careers showcasing the many opportunities to carve out a fulfilling and stimulating role within general practice. Long-term conditions and women's health are the bread and butter of my clinical role and within every clinic I see evidence of why these conditions require and deserve a specialist, skilled workforce who keep up with current evidenced-based practice and referral guidelines. The GPN role is an incredible opportunity to manage upstream issues before they become acute and urgent problems.

No one said it would be easy, but we do need to ensure our value is recognised and work with confidence to advocate for the GPN role and encourage new nurses to embrace the many benefits of this professional path. Please read and reflect on Steph Lawrence's article and consider where it resonates with you and do write in with ideas about what we can do to support our amazing yet potentially endangered occupation.

We have a fantastic contents list in this issue and it's hard to touch on everything. Some highlights for me were Karen Tyrell's description of Drinkaware's prevention strategy to help reduce harm from alcohol. I hadn't heard of the term 'zebra striping' before but will proudly use this at the pub when all I need is a fizzy water for the second round. I find that many people are unaware of the units of alcohol they consume and the potential harm from this, and regularly signpost to Drinkaware's Drinking Check digital tool to help them understand and take action around their drinking risks. Hasan Alsaratee's article is also helpful for updating GPNs on how to assist women with urinary incontinence, especially given its high prevalence and impact on quality of life. As GPNs, we are often asked about skin issues. Judith Harford's evidenced-based review for acne management in teenagers is a practical, useful read.

As well as the articles I have mentioned, there is a wealth of clinical and career development information in this issue. Please do write into the journal with issues that currently impact your work, career development and education – we would love to hear from you.

Jaqui Walker, editor-in-chief

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of clinical content, Education for Health;
advanced nurse practitioner, Aultbea and
Gairloch Medical Practice; academic assessor,
Public Services Delivery Scotland

Joanne Loades, independent nurse
consultant in cardiovascular disease, Norwich

Caroline McIntyre, primary care
pharmacist, Forth Valley Royal Hospital,
Larbert

Callum Metcalfe-O'Shea, UK professional
lead for long-term conditions, Royal College
of Nursing (RCN); national nursing advisor
for primary care, Macmillan

Rebecca Penzer, dermatology specialist nurse,
honorary lecturer, University of Hertfordshire

Michelle Phillips, senior nurse manager –
North and Nottingham, Operose Health

June Roberts, consultant nurse, assistant
director of nursing, Salford Royal NHS
Foundation Trust

Michelle Treasure, independent nurse
educator, Dragon Respiratory; respiratory
nurse specialist, Asthma+Lung UK



I'm really excited to be part of the editorial board and be an integral part of helping GPNs to develop and share innovative practice and drive the profession forward. With unprecedented pressures on our service, it is fantastic to be involved with an easily accessible journal that addresses the many services that we deliver, and shares best practice so that we can reach our goal of providing safe and effective care.

Judith Harford



I am honoured to join the editorial board, bringing with me extensive experience in general practice nursing, where I developed

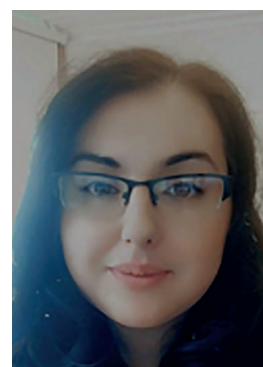
a strong commitment to long-term condition management and preventative healthcare. I believe general practice nursing teams play a crucial role in delivering high-quality, safety-critical care that not only improves patient outcomes, but also reduces hospital admissions. Throughout my career, I have had the privilege of leading multisite healthcare organisations, with a particular focus on training and developing nursing teams. Supporting the next generation of nursing professionals has always been a key priority in my work. In my recent role with the Royal College of Nursing, I have been closely involved in promoting innovative practices and knowledge sharing across the sector. I am excited to contribute to the editorial board's mission of providing vital, up-to-date educational resources that support the ongoing professional development of nursing staff.

Leanne Hume



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



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

JOURNAL OF GENERAL PRACTICE NURSING





I am delighted to join the editorial board of the *Journal of General Practice Nursing* so that I can better

contribute to advancing the standards of care within healthcare services. With over 22 years of experience in clinical governance, quality assurance, and leadership, I am dedicated to improving patient outcomes and promoting collaboration across multidisciplinary teams. As a Queen's Nurse and a strong supporter of evidence-based practice, I am committed to facilitating discussions on best practices and sharing insights gained from my work at local and national levels. I see this opportunity to be part of the board as a chance to contribute to developing strategies that will empower healthcare professionals and enhance patient care.

Michelle Phillips



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



It is a real honour to be invited to the editorial board of such a prestigious nursing publication, especially when I have been using the *Journal of*

General Practice Nursing to guide my own clinical practice over the last decade. With a passion for education within primary care, I am very aware of the rapidly changing landscape of practice nursing, the role of the GPN as a 'gatekeeper' to the NHS and the increased workload that is expected of us on a daily basis. Education is fundamental to achieving a stronger, more informed nursing workforce who are better prepared to meet the diverse needs of the ever-changing population. Patient outcomes are improved when nurses are confident and able, readily employing their skills of critical thinking and using evidence-based principles of care. Education, of course, is key in achieving all of this. I am excited for the opportunity to contribute to such a valuable publication and I hope I will be able to bring some positive insights and facilitate the growth and development of the journal going forward.

Michelle Treasure



Having the opportunity to review and share knowledge around long-term conditions and primary care nursing is a great honour as part of the editorial board. The GPN

workforce is crucial to providing high standards of care across multimorbidity, and promoting best practice through the journal will only serve to enhance standards further. Primary care continues to shine as a diverse care sector that requires GPNs to be versatile, competent and confident in their daily practice, and this journal aims to inspire all GPNs to provide the best, evidence-based care possible.

Callum Metcalfe-O'Shea



It is an honour and such an exciting opportunity to have been invited to represent the *Journal of General Practice Nursing* editorial

board. As an academic, nurse and NMC registered nurse teacher, this opportunity will give me the chance to review contemporary research and share evidenced-based practice to deliver high quality patient-centred care, as well as raising the profile of practice and community nursing. I am so proud to be a nurse and Queen's Nurse and the impact that all of us in this profession have on patients' lives. I am a big advocate for working in primary care and promoting the career opportunities that are available to nurses and other healthcare professionals within the sector. This journal is a great platform for collaborating with like-minded healthcare professionals working in primary care and I look forward to representing the journal as a board member.

Matthew Cain



My passion for education has given me such an amazing general practice nursing career. To be invited

to become a member of the editorial board 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

In each issue we investigate a topic affecting you and your practice. Here, we ask...

Is it too late to fix social care?

Recently, it seems that Westminster politics has started to resemble that old joke about London buses – you wait ages for a new prime minister, then a whole succession of them come along at once.

Still, while we strive to remain politically neutral at the GPN, it has been refreshing to see that Andy Burnham, the latest holder of the keys to number 10 (or the poisoned chalice, whichever way you choose to look at it), is at least making the right noises about putting social care at the top of his agenda.

In a recent speech, the new PM signalled that one of his first moves in office would be to bring forward by a year the results of Baroness Casey's independent commission on adult social care, which is tasked with fixing England's complex and malfunctioning care system.

As part of this work, Baroness Casey launched, the Big Conversation on Care, billed as an opportunity for people across the country to share their views on 'what they want and expect from a future National Care Service' ('Baroness Casey launches the Big Conversation on Care with the public' – caseycommission.co.uk).

But to inject a healthy dose of cynicism, is meaningful change to social care really on the cards or is our latest PM simply telling us what we want to hear? After all, anyone who has worked in the NHS over the past few decades will be familiar with the endless merry-go-round of broken reform and funding promises. And importantly, what will the new focus on social care mean for you?

IS IT BROKEN AND CAN WE FIX IT?

First, it is important to understand



We need to recognise that more people are living longer with multiple, complex long-term conditions, which require highly skilled staffed, appropriate funding and an adaptable social care service. This is of no surprise to many of us working in the healthcare setting, but what we need to recognise is the knock-on effect that poor social care provision has on general practice. This article identifies the increasing workload of GPNs and how adequate

social care provision could contribute to health promotion and prevention, helping people to maintain healthy lifestyles – an area all of us are trying to improve. GPNs may not see themselves as directly impacted by or related to the social care reforms, but often they will be liaising and communicating with social care teams, particularly in the context of long-term condition management. This is why, as a profession, now is the time to continue championing the need for social reform – to support both acute and long-term care needs of different patient populations. GPNs are the 'glue' that holds the community together, and social care wraps around the parameters of GPN practice and therefore needs to be at the forefront of all our minds – from commissioners to frontline practitioners.

Callum Metcalfe-O'Shea

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

“In a recent speech, the new PM signalled that one of his first moves in office would be to bring forward by a year the results of Baroness Casey's independent commission on adult social care... .

what has gone wrong with social care in the UK and why the PM felt the need to put it at the top of his policy agenda, even citing his own personal experience of having carers look after his father, commenting that 'it is incredibly demanding and skilful what they do and that needs

to be recognised' ('Prime Minister's speech on social care' – www.gov.uk).

We don't have to rely on the new PM's word for it, however; the declining state of the UK's social care sector has been attracting attention for some time. Back in 2023, *The Guardian* was reporting that care services were struggling, with over 400,000 people living in care homes in England and over 800,000 receiving care in their home against a backdrop of 160,000 staff vacancies ('State of social care in England' 'never been so bad', social services boss warns' – www.theguardian.com).

A year later, the picture hadn't improved, with the Nuffield Trust,

an independent health and social care think tank, noting that 30 years of government inaction had left adult social care in a parlous state with 'hundreds of thousands of people face unlimited costs, or going without the support that could enable them to live fulfilling lives' ('The state of social care in England' – www.nuffieldtrust.org.uk).

Skip to a few months before the PM's speech and a succession of politicians had still failed to grasp the nettle of social care reform, leading the Care Quality Commission – the independent regulator of health and adult social care in England – to conclude that 'People cannot always access the care and treatment they need when they need it, and the system often fails to deliver effective, joined-up care' ('The state of health care and adult social care in England 2024/25' – www.cqc.org.uk).

So, how does this affect your work? Well, if you hadn't already noticed, the failing social care sector has some serious knock-on effects for primary care nurses who have to pick up extra work due to a lack of care staff to manage elderly patients with multiple conditions, or those living at home with complex needs such as deteriorating wounds becoming more unwell due to a lack of social care input.

And that's before we even mention those of you who are registered nurses and work in care homes and nursing homes, with the Royal College of Nursing (RCN) pointing out that the nursing workforce 'is so burnt out from caring for too many people that one in three are looking to leave' ('Depleted social care workforce burnt out and demoralised as underfunding issues persist' – www.rcn.org.uk).

WHAT IS BARONESS CASEY'S REMIT?

Given that our crumbling social care system can no longer be ignored and for once there seems to be the political will to change it, what can we expect from Baroness Casey's review?



Primary, community and social care nursing are increasingly recognised as central to the future of healthcare delivery, as highlighted within the NHS Long Term Plan and the ongoing transformation of services from hospital-based care to community settings. As health systems continue to focus on prevention, early intervention, and reducing avoidable hospital admissions, there is a timely opportunity to raise the profile of social care and the essential role it plays in supporting individuals to maintain their health, wellbeing, and independence.

To meet the evolving needs of the population, it is vital that the nursing workforce is prepared to deliver high-quality care across community and social care environments from the point of registration. This requires a stronger emphasis on community readiness within pre-registration nursing education, ensuring learners develop the knowledge, skills, and confidence needed to provide person-centred care in diverse settings.

Social care experiences should be more prominently embedded within undergraduate nursing curricula, offering learners meaningful opportunities to engage with the realities of providing care for people with complex health and social needs. Exposure to 'real-life care for real-life people' enables future nurses to better understand the wider determinants of health, the importance of multidisciplinary collaboration, and the value of supporting people within their own communities.

The delivery of timely, effective, and proactive care in community settings is critical in reducing pressure on acute services and improving health outcomes. As demand for healthcare continues to grow, strengthening community and social care services will be fundamental to achieving sustainable, integrated models of care.

Furthermore, the contribution of nurses working within social care settings deserves greater recognition and visibility. This is particularly true for learning disability nurses, whose expertise plays a pivotal role in reducing health inequalities, promoting inclusion, and supporting individuals to lead meaningful lives. Capturing and disseminating evidence of the impact of nursing practice across social care services will strengthen understanding of the profession's value and influence future workforce development.

Ultimately, a strengths-based approach that focuses on care enablers rather than barriers should underpin both education and practice. By recognising individual capabilities, promoting independence, and fostering supportive community environments, nurses can play a transformative role in delivering person-centred care and improving outcomes across health and social care systems.

Matthew Cain

Senior lecturer in adult nursing and MSc nursing course leader, University of Huddersfield; primary care educator, NHS England; Queen's Nurse



In the twilight of my career, I have seen many attempts and heard many manifesto promises over the decades of how our government will 'fix' social care. Remember Tony Blair's government funding the Royal Commission into long-term care for the elderly, recommending state-funded personal care, a proposal rejected the following year, arguing that it was too expensive (GOV.UK 2010).

As health secretary in 2010, Andy Burnham, under Gordon Brown's government, published 'Building the National Care Service' acknowledging the 'current care and support system is no longer sufficient'. This paper was considered, bold and ambitious by the government, (GOV.UK 2010), but despite this, it was finely rejected, with accusations of a 'Death Tax' from the opposition, with its demand for a proposed 10% levy on estates to pay for social care reform.

In 2011 the Dilnot Commission was established to report on how to deliver a fair, affordable and sustainable funding system for social care in England (King's Fund, 2011). Funding social care was still recognised as inadequate, unfair and unsustainable. The aim of the Dilnot Commission, lead by Sir Andrew Dilnot, was to eliminate the catastrophic care costs faced by some people, by capping the maximum amount individuals contribute over their lifetime, beyond which the state would meet all future funding. Despite appointing independent commissions to produce answers to how people pay for their social care, neither Labour nor Conservative governments implemented their recommendations. The coalition government, led by David Cameron argued it was a 'time of consolidation', it was 'not the right moment to be implementing expensive new commitments such as this'.

As prime minister, Theresa May reaffirmed her argument to pursue a bold programme of social reform (GOV.UK 2016), soon referred to as 'The Dementia Tax'. Politicians argued they were receiving a great deal of backlash from their constituents; it was not long before this manifesto promise was abandoned.

In his first speech as prime minister, Boris Johnson pledged, 'we will fix the crisis in social care once and for all with a clear plan we have prepared to give every older person the dignity and security they deserve' (GOV.UK, 2019). In 2021, the government set out the plans in its policy paper, 'Build Back Better: Our Plan for Health and Social Care' (GOV.UK, 2021). Updated in 2024, a policy paper 'Adult social care charging reform: further details', moved the dial again, introducing a new £86,000 cap on the amount anyone in England will need to spend on their personal care over their lifetime (GOV.UK, 2024).

There seems to be a theme emerging here, or is this just me, who while remaining politically neutral, sadly I must reserve judgement. I read Andy Burnham's pledge as prime minister to expedite Baroness Casey's commission results to be published in 2027 with hope; we have an opportunity to help the millions of people who live in fear, worrying about how they will pay to live well with dignity. Will reform happen? I really hope so. Perhaps now is the time to reflect on a quote from Nelson Mandela, 'It always seems impossible until it's done'.

Julie Lennon

Queen's Nurse; director of clinical content, Education for Health; advanced nurse practitioner, Aultbea and Gairloch Medical Practice; academic assessor, Public Services Delivery Scotland

King's Fund (2011) *The Dilnot Commission Report on social care*. Available online: www.kingsfund.org.uk/insight-and-analysis/briefings/dilnot-commission-report-social-care

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GOV.UK (2021) *Build Back Better: Our Plan for Health and Social Care*. Available online: www.gov.uk/government/publications/build-back-better-our-plan-for-health-and-social-care

GOV.UK (2024) *Adult social care charging reform: further details*. Available online: www.gov.uk/government/publications/build-back-better-our-plan-for-health-and-social-care/adult-social-care-charging-reform-further-details

For a start, as part of the wider Independent Commission on Adult Social Care, she has launched the optimistically titled 'Big Conversation' with the aim of answering the question – 'When we are old or disabled, or have a serious illness, who should support us and how?'

The initiative aims to canvass the views of people with experience of social care through an online platform (<https://caseycommission.co.uk/bigconversation/take-part/>), as well as actively seeking the views of staff such as nurses who work in adult social care and holding consultations with a Public Panel on Care (although who exactly will make up this panel is not entirely clear).

As for the Independent Commission itself, this is to be delivered in two parts ('Casey Commission, Terms of Reference' – caseycommission.co.uk):

- Phase 1: holding a national conversation about how adult social care should be delivered as well as developing a consensus among the public on how to meet the care needs of the population. It will focus on a range of issues such as how to fund adult social care services and deliver a neighbourhood health service
- Phase 2: this is where the commissions remit becomes a little opaque, with the website stating that phase 2 should 'look at the model of care needed to address demographic change, how services must be organised to deliver this and discuss alternative models that could be considered in future to deliver a fair and affordable adult care system'.

WHAT THE EXPERTS SAY

So far, reactions to the PM's decision to accelerate the Casey Commission's findings have been fairly positive, although this comes with a significant caveat because it's hard to disagree with a policy, which basically amounts to 'Let's fix social care!'



“ ... improved social care packages for patients leaving hospital with complex needs will mean that the burden of caring for these patients at home will no longer fall on overworked general practice, community and district nurses.

Still, there have been assenting voices, with Dr Devan Moodley, doctor and CEO of Health Connect Global, stating: 'The most important word in today's announcement is "integrated". A national care service only works if the district nurse can see what the care worker wrote that morning – and in most of the country, she can't... get the records right and every other part of this reform gets easier.'

Caroline Russell, chief executive of Parkinson's UK, was similarly positive, noting that: 'The Prime Minister is right: social care has been kicked down the road for far too long, and people with Parkinson's and their families are paying the price every single day.'

There were also some notes of caution, with some commentators pointing out that we've had similar announcements in the past without the necessary funding and follow-up.

Sarah Woolnough, chief executive of The King's Fund, summed this up bluntly: 'Anyone who has followed social care reform will recognise a Groundhog Day pattern. A decades-long failure to act with attempts to fix the system now resting in Westminster's graveyard of good intentions.'

However, despite these stark warnings, Woolnough did also echo the hopes of other commentators, stating: 'This is the moment to seize the opportunity and show what social care can do to improve people's lives, whilst also relieving the burden of this broken system on the NHS. At its core, a functioning social care system would give people the dignity they should expect when they are at their most vulnerable.'

WHAT MIGHT SOCIAL CARE REFORM MEAN FOR YOU?

Reforming social care, may be a huge task, but if carried out effectively it may pay dividends for primary care nurses. For example, improved social care packages for patients leaving hospital with complex needs will mean that the burden of caring for these patients at home will no longer fall on overworked general practice, community and district nurses.

Similarly, having more social care staff with training and skills in 'minor' issues such as early leg and pressure ulcers, or the need for ongoing diabetes monitoring will mean that



Call me pessimistic, but I genuinely struggle to see how we can bring the system back to a consistently high standard for everyone who needs it. After decades of underfunding, understaffing and increasing demand, regardless of who is in charge at number 10, I think it will take years of genuine focus, investment and commitment to create meaningful change. Improving accessibility to social care on the scale that is needed will not happen overnight, and it may be years before we see a significant impact on day-to-day workloads.

In Scotland, delayed access to social care is a huge contributor to delayed discharges from hospital, which in turn has a direct impact on bed availability. I have seen first-hand the consequences of this: patients being treated in corridors and waiting rooms, and six-bedded bays being stretched to accommodate seven or more patients. It is heartbreaking to see the impact this has on people who are stuck in hospital waiting for the social care package they need to return home, as well as those living at home in unsafe or unsuitable circumstances because there is simply no other option available to them.

The ripple effect of substantial delays in accessing social care reaches every level of the health and care system. For the individual waiting, the consequences can be devastating. Prolonged hospital stays can lead to rapid deconditioning, loss of independence and, in some cases, deterioration that may be irreversible. Frankly, that should not be acceptable and yet sadly is becoming something regularly heard of.

What makes it even more frustrating is that the people working across health and social care are doing an incredible job in incredibly difficult circumstances and continue to give all they can. Staff continue to work under immense pressure, trying to provide the best possible care with limited resources. Yet somehow, we cannot seem to reach a point where the system is able to consistently provide the right care, in the right place, at the right time.

Cheryl Crawford

Diabetes specialist nurse, Crosshouse Hospital, Kilmarnock

these problems do not develop into medical emergencies requiring specialist nursing input.

As the Royal College of Nursing's general secretary and chief executive, professor Nicola Ranger, said in response to the PM's speech, the government's plans to reform social care have the potential to ease the burden currently falling on you and your colleagues:

The prime minister has shown that he gets the urgent need for social care reform... A sustainable system and a new model with registered nurse-led care at its core will be transformative in delivering high-quality, person-centred treatment and support, while reducing the pressure on the NHS.'

('Put nurse-led care at heart of new national care service, says RCN' – www.rcn.org.uk).

As for each of you – hard-working nurses who just want to do your best for your patients – we can only

hope that the new PM's enthusiasm is enough to see him through the myriad challenges involved in reforming social care. Otherwise, the pure size of the task and the funding required might yet mean that we have another resident at number 10 before too long. **GPN**

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From earlier diagnosis to personalised care, general practice nurses are central to better cancer outcomes

RCN and C the Signs

Here, Callum Metcalfe-O'Shea, UK professional lead for long-term conditions at the Royal College of Nursing (RCN), speaks with Dr John Woolley, GP and, at the time of writing, clinical lead for 'C the Signs', about the evolving landscape of cancer detection in primary care and the pivotal role general practice nurses (GPNs) play in supporting earlier diagnosis, personalised care, and safety netting. These questions explore why cancer care is becoming an increasingly vital component of the GPN role and what tools and resources can support nurses in practice.

Cancer remains one of the leading causes of morbidity and mortality across the UK, with around 1,100 people diagnosed every day (Cancer Research UK, 2026). Early identification is critical to improving outcomes, and primary care is the frontline of that effort. General practice nurses (GPNs) are often the first point of contact for patients presenting with vague, non-specific, or seemingly unrelated symptoms – and their holistic approach places them in a unique position to recognise early warning signs, initiate timely investigations, and support patients through what can be an anxious and uncertain period.

As the prevalence of multimorbidity increases, cancer risk assessment is becoming an integral part of long-term condition reviews, frailty assessments, and routine consultations (National Institute for Health and Care Excellence [NICE], 2016). GPNs build trusted, longstanding relationships with patients, enabling them to notice subtle changes, provide personalised advice, and reinforce safety netting strategies that reduce delays in diagnosis. Their role spans health promotion, symptom awareness, shared decision-making, and continuity of care – all of which are essential to improving cancer outcomes (NHS England, 2023).

With the support of innovative tools such as 'C the Signs' (<https://www.cthesigns.com/>), nurses now have access to evidence-based decision support systems designed to identify patients at risk of cancer earlier and streamline referral pathways. These resources

“GPNs build trusted, longstanding relationships with patients, enabling them to notice subtle changes, provide personalised advice, and reinforce safety netting strategies that reduce delays in diagnosis.

can enhance clinical confidence, reduce unwarranted variation, and strengthen multidisciplinary working across primary care.

Through this article, GPNs can deepen their understanding of their role in cancer detection and explore the practical resources available to support them. Dr John Woolley answers key questions about the future of cancer care in general practice and how nurses can continue to develop their knowledge, skills, and impact in this crucial area.

Q How is cancer detection evolving in primary care, and what does this mean for the role of GPNs and advanced nurse practitioners (ANPs)?

A Most clinicians can recall a consultation that seemed straightforward at the time but later turned out to be a sign of cancer. A symptom that initially appeared common or benign, but in hindsight marked the beginning of a much more serious diagnosis.

In primary care we often see patients early in their illness.

Increasingly, the focus is on recognising cancer risk at this earlier stage, even when symptoms are vague and far from diagnostic, as earlier diagnosis is associated with improved outcomes for patients. The challenge is recognising when something common is not behaving as we would expect.

Many cancers do not begin with obvious 'red flag' symptoms. Instead, they emerge through persistent symptoms or subtle changes over time. For GPNs and ANPs, this places clinical curiosity and risk awareness at the centre of consultations.

Safety netting therefore becomes critical, providing a structure that supports safe follow-up and ongoing review. Not every cancer will be identifiable at the first consultation, particularly when symptoms are non-specific. Clear advice about when to return, alongside attention to repeated consultations, highlighted through initiatives such as Jess's Rule, which asks GP teams to reflect, review and rethink the diagnosis when a patient presents a third time with the same or escalating symptoms (NHS England, 2025) can help to ensure that evolving symptoms are reassessed and investigated appropriately.

Q What early warning signs or symptom patterns should GPNs be particularly alert to when assessing cancer risk?

A In everyday primary care consultations, the key challenge is recognising patterns across repeated presentations rather than identifying a single concerning

symptom. Clear red flag symptoms remain important and should always prompt appropriate investigation, but many cancers will not present in this way.

Repeated consultations are often the key signal. When a patient returns several times with similar concerns, it may indicate that the original diagnosis no longer fully explains what is happening.

A common pitfall is the 'recurrent plausible alternative', where symptoms are repeatedly attributed to conditions such as infection or other common diagnoses. A well recognised example is bladder cancer in women, where urinary symptoms may be treated repeatedly as urinary tract infection before further investigation is considered. This is one of the factors thought to contribute to differences in outcomes between men and women with the same condition (Lyrtatzopoulos et al, 2013).

In practice, assessing cancer risk in primary care relies on recognising patterns and reconsidering the diagnosis when symptoms do not behave as expected.

Q How can digital platforms such as 'C the Signs' support GPNs and ANPs in identifying and managing cancer risk?

A When faced with these patterns and uncertainties, deciding how best to move the case forward can be challenging. Systems that help structure risk assessment can be helpful.

Guidance such as the National Institute for Health and Care Excellence suspected cancer guidelines provides an important framework for referral pathways (NICE, 2015). However, patients often present with symptoms that do not neatly align with a single pathway.

Digital clinical decision support platforms bring together symptoms, risk factors and clinical history in a structured way. This allows clinicians to consider a wider range of potential diagnoses and identify when cancer risk should be explored further.



Photograph: PeopleImages/Shutterstock

For GPNs and ANPs these platforms can clarify the most appropriate next step, whether that involves referral, investigation or monitoring. They also support safety netting by helping to ensure that appropriate follow-up is in place and that intended actions are completed.

Q What does effective integration of platforms such as 'C the Signs' look like within a general practice team?

A Decision support platforms work best when they are embedded in routine clinical workflow, rather than used only in complex cases.

GPNs and ANPs often identify potential concerns during everyday consultations, such as long-term condition reviews, screening appointments or triage contacts. Access to a shared system for assessing risk can support discussions with colleagues when escalation may be appropriate.

Administrative teams also play an important role by ensuring that referrals are sent, hospital letters are coded and follow-up processes are monitored.

Used across the practice team, these systems can help patients move safely through the diagnostic pathway when concerns arise.

Q How can digital platforms help address inequalities in cancer diagnosis?

A Inequalities in cancer diagnosis are influenced by factors such as socioeconomic deprivation, ethnicity, geography and differences in how people access healthcare.

However, inequalities can also arise from assumptions about who is considered to be at risk. When cancers are strongly associated with particular groups, patients outside those groups may be overlooked.

For example, lung cancer is often linked to smoking, yet lung cancer in never smokers accounts for around 15% of UK diagnoses, making it the eighth most common cancer when considered as a disease in its own right (Khan et al, 2023).

Digital platforms support a more systematic approach to risk assessment by bringing together symptoms, risk factors and clinical history, helping clinicians consider a wider range of possible diagnoses across different groups of patients.

Q What knowledge, skills, and training do GPNs and ANPs need to feel confident in contributing to earlier cancer diagnosis?

A Improving early cancer diagnosis in primary care relies on curiosity and clinical awareness.

Many cancers begin with symptoms that appear common and non-specific. Being willing to pause and reflect when symptoms persist can make an important difference to earlier diagnosis.

Patterns such as evolving symptoms or repeated consultations may highlight patients who need further investigation.

Earlier cancer diagnosis often begins when a patient's story does not quite add up.

Q What resources and learning opportunities does the RCN offer to support GPNs and ANPs in developing their cancer care knowledge and confidence?

A The RCN Cancer Forum provides a range of practical learning opportunities designed to help GPNs and ANPs build confidence in cancer care across the whole pathway. Key resources include:

- RCN Career Frameworks (RCN, n.d.), including the Aspirant Cancer Career and Education Development programme (ACCEND) framework, which outlines clear development pathways for nursing staff involved in cancer care (NHS England, n.d.). These frameworks help GPNs and ANPs understand the knowledge, skills and capabilities required at different levels of practice. While related mainly to cancer settings, they can be applied to their role in general practice
- Webinars and virtual learning, including the recent collaborative session with the RCN GPN Forum and 'C the Signs' on the role of primary care nurses in early cancer diagnosis. This webinar explores practical approaches to early recognition, safety netting and communication in primary care, and is available on YouTube: www.youtube.com/watch?v=EDMdUS_RQ7g
- Forum-led discussions and shared resources, offering members access to expert insights, peer learning and

updates on best practice across screening, early diagnosis, personalised care and treatment support.

These opportunities help GPNs and ANPs stay informed, build capability and feel more confident supporting people affected by cancer in primary care.

Q What upcoming guidance, tools, or professional networks can GPNs access to stay informed and connected in cancer care?

A (From Callum Metcalfe-O'Shea) GPNs and ANPs can stay connected and up to date through several RCN professional forums, including the RCN Cancer Forum, RCN GPN Forum and RCN ANP Forum, which are open to all members. These forums share relevant news, resources, events and opportunities for professional discussion. Joining these networks ensures that GPNs and ANPs remain connected to national developments, peer expertise and the wider professional community.

CONCLUSION

Cancer detection in primary care is changing rapidly, and GPNs and ANPs are central to that transformation. Their holistic assessments, continuity of relationships, and ability to recognise subtle changes place them at the heart of earlier diagnosis and personalised care. With digital tools such as 'C the Signs' becoming increasingly embedded in everyday practice, nurses are better equipped to navigate uncertainty, reduce unwarranted variation, and support patients through timely and safe diagnostic pathways.

By engaging with RCN resources, professional forums, and emerging guidance, GPNs and ANPs can continue to strengthen their knowledge, confidence, and impact. The future of cancer care in general practice depends on a workforce empowered with the right skills, supported by robust systems, and connected through strong

professional networks – and nurses are uniquely positioned to lead this progress. **GPN**

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Improving COPD reviews, self-management and outcomes

Why we need a concerted plan for COPD care

WHAT ARE THE CURRENT ISSUES AROUND COPD CARE?

It is no secret that lung health is in crisis in this country. While there has been a dedicated focus on improving cardiovascular and cancer care, respiratory has lagged, and it is the three million people living with chronic obstructive pulmonary disease (COPD) in the UK (Whittaker et al, 2025) who are bearing the brunt of this as they struggle to get a diagnosis and optimum care.

Fewer than one in 10 people with COPD (8.8%) surveyed by charity Asthma + Lung UK are receiving the 'five fundamentals' of care recommended by the National Institute for Health and Care Excellence (NICE, 2019; Asthma + Lung UK, 2025a). This includes smoking cessation, vaccination, pulmonary rehabilitation (PR), personalised self-management planning and optimised treatment for comorbidities.

The model the author has implemented is called SCOPES, and comprises the six elements of any discussion that nurses should be having with their patients at a post-exacerbation review. She would like to see this model becoming



“Being able to diagnose people with COPD while they are still in the mild stages of the disease is crucial, as this slows down irreparable lung damage, but this rarely happens.

a national benchmark of good respiratory care. It has already been adopted across her own integrated care board (ICB), Hampshire and Isle of Wight, as well as by several other systems across England.

The six elements of **SCOPES** include:

- **S:** Smoking cessation
- **C:** Comorbidities and cardiovascular risk assessment
- **O:** Optimisation and vaccinations
- **P:** Pulmonary rehabilitation
- **E:** Exacerbation and eosinophil history
- **S:** Self-management.

After successfully trialling the protocol across her primary care network (PCN), patients who were reviewed with SCOPES within four weeks of a moderate or severe COPD exacerbation showed better engagement in subsequent reviews.

An increased acceptance of smoking cessation and pulmonary rehabilitation referrals, improved cardiovascular assessment, and earlier referral to secondary care for frequent exacerbators were also seen.

Maria Eurton, respiratory nurse specialist, Living Well Partnership Primary Care Network, Southampton

EDUCATION IS VITAL

In the author's clinical experience, awareness of COPD is shockingly low. There is an assumption that breathlessness is just an inevitable part of growing older, which it is not. Many people dismiss tell-tale symptoms simply as a 'smoker's cough' that is nothing to worry about.

There is also a lack of understanding around the significance of every exacerbation. Not only can a nasty flare-up significantly reduce lung function, but it can also put a patient at increased risk of cardiovascular problems and strokes. In fact, one study shows that in the first 91 days after a severe exacerbation someone is at a 2.58-fold higher risk of having a heart attack (Rothnie et al, 2018).

Because breathlessness can be a symptom of so many different conditions, symptoms of COPD, which include a continuous cough, frequent chest infections, and breathlessness on exertion (NICE, 2019), can easily be dismissed as chest infections or winter bronchitis.

Unless a clinician is particularly respiratory-focused, general symptoms like coughing and breathlessness might not be instantly recognised as hallmarks of COPD within the context of a 10-minute GP consultation.

ROADBLOCKS TO DIAGNOSIS

Being able to diagnose people with COPD while they are still in the mild stages of the disease is crucial, as this slows down irreparable lung damage, but this rarely happens. Indeed, estimates suggest that as many as half to two-thirds of people with COPD have not yet

been diagnosed (Asthma + Lung UK, 2022).

One of the biggest barriers to timely and accurate diagnosis of COPD is access to diagnostic testing, particularly spirometry, which is required to confirm a diagnosis (NICE, 2019; Asthma + Lung UK, 2022). There is currently no standardised financial incentive to offer spirometry testing in primary care, which is a real problem. Spirometry provision is also geographically patchy, with some integrated care boards unable to offer it at all, and others lacking sufficient numbers of appropriately trained (including Association for Respiratory Technology & Physiology [ARTP] registered practitioners) staff to deliver and accurately interpret results (Asthma + Lung UK, 2025b; ARTP, 2026).

WORKFORCE ISSUES

The ARTP provides the only nationally recognised, NHS-endorsed and Care Quality Commission (CQC) supported accreditation for spirometry, but it involves completing a six-month course, which can be a challenge for many nurses.

Furthermore, skill gaps around the management of chronic lung conditions is starting to emerge as nurses leave general practice and retire and GPs focus on more urgent respiratory cases.

COPD can be particularly complex for less experienced nurses, as so many patients have other chronic conditions too. It can be a challenge to get a 'whole person' picture of a patient in a 30-minute review without a focused approach, such as SCOPES.



Practice point...

Nurses and pharmacists can conduct SCOPES reviews, as well as social prescribers, and health and wellbeing coaches can also offer additional help.



Credit: crystal light/Shutterstock

“ COPD can be particularly complex for less experienced nurses, as so many patients have other chronic conditions too. It can be a challenge to get a ‘whole person’ picture of a patient in a 30-minute review without a focused approach, such as SCOPES.

STRUCTURAL CHANGE

It is no coincidence that the UK currently has the highest death rate from lung disease than anywhere else in Europe (eurostat, 2026). Many in the respiratory community, including Asthma + Lung UK, are now calling on the NHS to prioritise a bespoke respiratory plan, otherwise known as a modern service framework (MSF) as soon as possible (see *Call for action box*).

In the author's clinical opinion, such an intervention would reduce preventable respiratory deaths, help to eliminate the health inequalities that exist in lung health, and would inevitably push up levels of care for the 12 million people in the UK who are living with a lung condition (International Respiratory Coalition, 2024).

The roll-out of neighbourhood respiratory hubs as part of this

plan, which take a multimorbidity approach, with health and wellbeing coaches and social prescribers on the staff, would make a real difference to outcomes in primary care.

Root-and-branch change is not something that nurses have much power to control, but a protocol like SCOPES could improve patient experience of COPD. National guidance recommends that people with COPD are reviewed following significant exacerbations (NICE, 2019); however, patient-reported and observational evidence shows that this does not occur consistently in practice (Williams et al, 2024).

Exacerbations are more common in winter, when respiratory illness places considerable pressure on NHS services, which may contribute to missed follow up (King's Health Partners, 2024). It is also important to note that not all exacerbations require a face-to-face medical review, as many can be managed safely in the community when patients have appropriate self-management plans and clear safety netting in line with NICE guidance (NICE, 2023; Asthma + Lung UK, 2026).

SMOKING CESSATION

The priority of a SCOPES review is to check whether a patient is still smoking and, if they are, to signpost them to the right services to help them stop.

Around nine out of 10 people with COPD have a history of smoking (Asthma + Lung UK, 2025a), and those who continue to smoke tend to live in more deprived areas and have much more frequent exacerbations than those who have successfully managed to give up.

When it comes to directing patients to smoking cessation services, clinicians need to assess whether the patient is in the right headspace to even think about quitting.

This really involves some soft skills and a degree of motivational interviewing, which accounts for someone's environment and any other stressors in their life. Although it is important to ensure that support services are out there, if someone simply is not motivated to stop, despite approaches such as 'very brief advice' (National Centre for Smoking Cessation and Training [NCSCT], 2026), there is little benefit in continuing the conversation, and a clinician certainly should never make anyone feel guilty.

The author's Living Well PCN has a hub of health and wellbeing coaches to support those patients who feel ready to quit. At the review, clinicians stress the fact that people who give up with the right support are proven to be three times more likely to succeed than those who go it alone (NCSCT, 2025).

COMORBIDITIES AND CARDIO-VASCULAR DISEASE RISK

According to Asthma + Lung UK's latest Life with a Lung Condition survey, almost 72% of people surveyed with a diagnosis of COPD have at least one other chronic health condition. The most common comorbidities are cardiovascular disease (CVD), asthma, diabetes, osteoporosis, diabetes, anxiety and depression.

If a patient does have a depressive illness, it is important to be aware that they are less likely to manage their COPD symptoms well. If they are exhibiting signs of low mood, it is worth doing an anxiety

and depression questionnaire with them.

It is important to make patients aware that COPD substantially increases the risk of cardiovascular disease and significantly increases the risk of myocardial infarction (Hurst and Gale, 2024).

“ If a patient does have a depressive illness, it is important to be aware that they are less likely to manage their COPD symptoms well.

OPTIMISATION AND VACCINATION

It is crucial that patients are getting the best effects from their medication. This is why it is vital for a nurse to check their inhaler technique at review and their adherence to their inhaler regimen.

The other vital check here is vaccinations. Take up of the flu vaccine was far too low this winter (UK Health Security Agency, 2025), and it is essential to stress that while having the jab does not necessarily guarantee that someone will not get flu, it does mean that they are less likely to become seriously ill and might save them from a hospital admission.

From clinical experience, there appears to be a continuing post Covid reluctance toward vaccination, with some patients expressing reduced confidence in vaccines and a belief that the influenza vaccine is not particularly effective. This reflects wider concerns about vaccine hesitancy and public trust reported since the Covid 19 pandemic. People with COPD should have their annual flu jab and the one-off pneumococcal vaccine, as these are two of the most effective interventions for preventing serious exacerbations.

PULMONARY REHABILITATION

For those who are not familiar with lung conditions, PR is perhaps one

of the most effective tools for living well with COPD (McCarthy et al, 2015). The treatment programme usually involves six to eight classes, which are usually delivered face-to-face and comprise exercises, lifestyle advice and techniques to manage breathlessness.

People should be signposted to PR by their healthcare professional. However, it is important to stress to patients that this is a non-medical solution, which, while likely to improve their symptoms, will not completely eradicate them.

As part of the review, there is no point referring without gauging any difficulties someone might have in accessing a course like this. For instance, are they able to get to classes? If the programme is offered digitally, do they have the digital tools to connect to classes effectively?

EXACERBATION AND EOSINOPHIL HISTORY

It is important to take a full exacerbation history of a patient with COPD during a review, as this gives the practitioner an idea as to how likely another exacerbation might be and what interventions can be put in place to prevent them.

One important consideration is blood eosinophil count. Levels of ≥ 300 cells/ μ L are associated with a higher risk of future exacerbations and indicate a greater likelihood of benefit from inhaled corticosteroids, including escalation to triple inhaler therapy. The first biologic treatment for COPD has recently been approved by NICE (2026) for people with uncontrolled disease and raised blood eosinophils (Wise, 2026).

Call for action...

Asthma + Lung UK is calling on the government to prioritise better care for people with lung conditions by calling for an MSF or dedicated respiratory action plan. To add your support, you can sign the charity's petition at: <https://action.asthmaandlung.org.uk/page/180228/data/1>.

If a patient is experiencing frequent chest infections and exacerbations, it is important to also consider the possibility of lung cancer.

SELF-MANAGEMENT

A SCOPES review concludes with targeted advice on diet and encouraging a patient to be as active as possible.

It is vital to stress that being breathless on exertion is completely normal and not something to avoid.

While it might not be realistic to get someone with COPD to run marathons, there is usually scope for them to extend their levels of activity – even if that involves just walking round the block once a day. It also includes a discussion on the importance of recognising COPD exacerbations and an introduction to other digital tools like the myCOPD app (<https://mymhealth.com/mycopd>), which is helpful.

CONCLUSION

COPD continues to be under-recognised and inconsistently managed, particularly following exacerbations when patients are at greatest risk. Experience from the use of SCOPES highlights the value of a structured, person-centred approach in ensuring that key elements of evidence-based care are addressed consistently. While wider system change is essential to improve respiratory services, practical frameworks such as SCOPES offer an immediate opportunity for nurses and multidisciplinary teams to strengthen reviews, support self-management and improve outcomes for people living with COPD. **GPN**

Maria Eurlon is one of Asthma + Lung UK's six regional Respiratory Champions. The Champions are funded by AstraZeneca and work directly with healthcare professionals across the NHS to play a pivotal role in delivering improvements to people with lung conditions.

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General practice nursing is vital and rewarding, but goodwill alone cannot sustain the profession

General practice nursing cannot remain the shock absorber of primary care

General practice nursing is often described as the backbone of primary care. The phrase is familiar, and it is true, but it can also obscure as much as it reveals. Backbones are expected to hold things up. They are rarely seen, seldom thanked, and too often noticed only when they begin to fail. The findings from a recent Queen's Institute of Community Nursing (QICN) national survey of general practice nurses (drawn from responses of over 1,000 nurses working in general practice across the UK) offer a timely and uncomfortable reminder that a highly skilled, deeply committed workforce is being asked to sustain an increasingly complex workload without the infrastructure, recognition, employment conditions or protected time required to do so safely.

The message from respondents is not one of professional disengagement. Quite the opposite. Across the survey, nurses describe pride in their work, commitment to their patients and a strong belief in the value of general practice nursing. They value continuity, prevention, health promotion, long-term condition management and the relational work that sits at the heart

of good primary care. Many continue to find meaning in the role because patients recognise and depend on them. Yet this commitment is being stretched to breaking point. Love of the job cannot compensate indefinitely for unsafe workload, unpaid labour, inadequate terms and conditions, weak professional voice and systems that routinely transfer failure onto clinicians.

The survey captures responses from 1,045 members of the general practice nursing workforce. It describes an experienced but ageing workforce: more than half of registered nurse respondents had been on the Nursing and Midwifery Council (NMC) register for over 20 years and around half had worked in general practice for more than a decade. This experience is a major asset for patients, practices and new neighbourhood teams and ways of working. It is also a workforce predicting what is around the corner and giving a clear warning of this. If younger nurses do not see general practice as a fair, supported and viable career destination, and if experienced nurses reduce hours, retire early or leave primary care, the consequences will be felt rapidly across access, continuity, prevention and long-term condition management.

The scale of care delivered is substantial. Respondents reported more than 102,000 appointments per week, including long-term condition reviews, results review, clinical procedures, immunisation, screening, public health activity and urgent or unplanned care. Extrapolated cautiously, this suggests a very large contribution to national primary care capacity. However, volume alone is a poor measure of the work. General

practice nursing consultations are increasingly complex. Respondents identified multimorbidity, behavioural risk factors, poor long-term condition control, language and cultural needs, medical anxiety and wider social complexity as major drivers of workload. These are not simple transactional encounters. They require assessment, risk management, education, shared decision-making, safeguarding awareness, documentation and often coordination with other parts of the system.

Yet the time allocated to this work often bears little relationship to the time required. Only around a third of respondents believed their consultation times were adequate to provide care to the required professional standard. More than a third reported being obliged to add patients to already full clinics daily. Many described working through breaks, starting early, staying late and using administrative time simply to catch up. This is not a sustainable productivity model; it is a hidden risk. Seventy-seven percent of respondents reported unpaid overtime, averaging just over three hours per week. If representative of the wider workforce, the survey estimates this could equate to hundreds of thousands of unpaid hours each year. In any other safety-critical service, such reliance on invisible labour would be understood and managed as a system risk.

One of the most important contributions of this work is its description of failure demand. Nurses reported spending time doing work that should not fall to them, or correcting work that had not been done, had been done incorrectly, or had been generated by poorly functioning systems. IT failures, poor interoperability, incorrect appointment booking, inadequate administrative support, fragmented communication with secondary care, equipment



Steph Lawrence MBE, chief executive, Queen's Institute of Community Nursing

problems and unsuitable estates were all issues that resulted in lost clinical capacity. Respondents estimated nearly 1,900 hours per week were spent by the sample on such activity. If this pattern reflects the wider workforce, it represents tens of thousands of hours of skilled nursing time each week absorbed by avoidable system failure.

This matters because failure demand is not neutral. When nurses troubleshoot IT, chase missing results, clean rooms, source equipment, rebook inappropriate appointments or repeat information that should have followed the patient, time is taken away from prevention, proactive care and therapeutic relationships. Patients experience delays, repetition and frustration. Nurses experience moral distress, because they know what good care requires but are prevented from delivering it consistently. The survey comments make clear that many problems are systemic rather than individual: a product of under-designed processes, fragmented pathways and a funding and employment model that leaves nursing labour too easily taken for granted.

Pay and employment conditions are therefore not separate from quality and safety; they are part of the same issue. Respondents described marked variation in pay, limited transparency, and frequent lack of parity with Agenda for Change. Many reported poor sick pay, statutory maternity pay only, limited annual leave and inconsistent access to continuing professional development (CPD). Advanced and specialist nurses described being paid below equivalent NHS bands despite carrying significant clinical responsibility. These conditions send a clear signal about professional value. They also shape recruitment and retention. A predominantly female workforce should not have to accept poor maternity provision or inferior employment rights as the price of working in primary care.

The implications for policy are immediate. Current ambitions for neighbourhood working, prevention and care closer to home depend on a stable, skilled and confident primary care nursing workforce. Those ambitions cannot be delivered by

rhetoric alone. If more care is shifted into the community, then workforce planning must include the nursing time, skill mix, supervision, digital infrastructure, estates, administrative support and clinical leadership required to deliver that care. Otherwise, transfer of activity becomes transfer of risk. The survey suggests that this risk is already being absorbed quietly by nurses who are working longer, faster and under greater pressure than formal workload measures reveal.

There are several priorities for action. First, general practice nursing needs a transparent national employment framework that supports fair pay, comparable terms and conditions, and clear progression. Local flexibility should not mean structural inequity. Second, workload planning must move beyond appointment counts and include complexity, indirect care, results management, safeguarding, supervision, governance, quality improvement and the invisible work that nurses routinely undertake. Third, consultation times must be clinically appropriate, not simply fitted to historic templates or financial pressures. A ten-minute slot is not safe or person-centred if the work requires assessment of multimorbidity, medicines, self-management, social context and risk.

Fourth, practices, primary care networks and integrated care boards should treat failure demand as a measurable quality issue. Time lost to IT failure, missing information, duplication and inappropriate transfer of work should be audited and addressed with the same seriousness as other safety and efficiency problems. Reducing avoidable system friction may be one of the fastest ways to release nursing capacity without asking nurses to work harder. Fifth, nursing leadership must be built into primary care structures. Decisions about access models, appointment templates, skill mix, delegation, supervision and service redesign should not be made without the people who understand the nursing work. A strong nurse voice is not a professional luxury; it is a condition of safe service design.

Finally, the development of the future workforce requires investment

in learning environments. Pre-registration students need meaningful exposure to general practice nursing. Newly qualified nurses need supported pathways into primary care. Experienced nurses need protected CPD, leadership opportunities and roles that allow them to pass on expertise without doing so in unpaid time. Without this, primary care will continue to depend on a cohort of highly experienced nurses while failing to create the conditions for those who should follow them.

The survey also offers hope. It shows a workforce with deep expertise, strong professional identity and an enduring commitment to patients. General practice nursing remains one of the most important and rewarding areas of nursing practice. But goodwill is not an operating model. If primary care is to meet the needs of an ageing population, reduce inequalities, support prevention and manage increasing complexity outside hospital, then general practice nursing must be properly resourced, properly led and properly valued.

This work should prompt leaders to ask a simple question: what would general practice look like if nursing time were treated as a scarce, skilled and strategic resource rather than an elastic band? The answer would be better designed appointments, fewer avoidable interruptions, stronger administrative systems, clearer career pathways, fairer employment conditions and more visible clinical leadership. It would also mean recognising that the nurse-patient relationship is not a soft add-on to primary care; it is one of its most powerful assets.

General practice nurses have held much of primary care together through persistence, professional judgement and unpaid effort. The task now is not to praise their resilience while leaving the conditions unchanged. It is to design a system that no longer depends on resilience as its main safety mechanism. The future of neighbourhood care, prevention and accessible primary care will depend on whether we choose to see, count and invest in the nursing work that has too often remained hidden in plain sight.

 Two decades of advancing prevention and reducing alcohol harm

Drinkaware at 20: working to advance prevention and reduce alcohol harm

This year marks a significant milestone for Drinkaware: 20 years of working to reduce alcohol harm across the UK. At the same time, we are looking ahead with renewed focus, having launched our 2026–2030 strategy with an ambitious plan to accelerate progress through prevention, behaviour change and partnerships.

For two decades, Drinkaware has been a leading independent charity, providing trusted advice, practical tools and evidence-based insight to individuals, policymakers and healthcare professionals alike.

Our role is unique. Drinkaware sits at the intersection of government, public health, industry and communities, convening partners to support a shared goal: making moderation the norm and reducing alcohol-related harm across the UK. As the NHS in England sharpens its focus on prevention through its 10-year plan, our mission has never been more relevant.

Our partnership-led approach is a critical complement to NHS delivery. We know that reducing alcohol harm at scale depends on reaching people where they live, work and socialise,

not only where they seek healthcare. Strong partnerships with employers, community organisations, charities, local authorities and industry enable us to connect with audiences who may not engage with traditional health services, or who do not see their drinking as a health issue. By working through trusted, everyday settings and non-traditional routes, we can intervene earlier, broaden our reach and help normalise healthier conversations about alcohol.

AN EVIDENCE-LED APPROACH TO PREVENTION

At Drinkaware, evidence drives everything we do. Our work is grounded in robust, independent research that informs our advice, shapes our campaigns and strengthens our partnerships.

Central to this is our annual Drinking Monitor, the UK's only nationally representative survey exploring drinking behaviours and trends in depth. This provides a detailed picture of how people drink in real life, enabling us to design interventions that are practical, targeted and relevant.

The latest Drinkaware monitor shows a nuanced picture of UK drinking. Positively, a record proportion of drinkers are moderating, and more drinkers are actively trying to cut back. However, typical unit consumption per drinking day has increased since 2025 and weekly binge drinking is also more common. These findings highlight the need for continued support to help people sustain positive behaviour change.

We know that drinking alcohol increases the risk of developing long-term illnesses such as cancer and liver disease, and the risk of developing short and long-term health problems increases the more people drink on a regular basis. The low-risk guidelines recommend that to keep health risks from alcohol to a low level, it is safest not to regularly drink more than 14 units a week (this applies to both men and women).

SHIFTING NORMS AMONG INCREASING RISK DRINKERS

As Drinkaware marks its 20th anniversary, we are also looking firmly towards the future. This year we launched a new five-year strategy, setting out an ambitious vision to accelerate progress in reducing alcohol harm across the UK.

The core focus of the new strategy is engaging with the 'increasing risk' population. These are people who regularly drink more than the low-risk guidelines, but who are not drinking at the very highest levels of harm. There are around seven million people drinking at increasing-risk levels, which represents a critical window for prevention. Many in this group do not recognise their level of risk and may not routinely engage with healthcare services about their drinking. Without support, some will go on to develop more serious alcohol-related health problems, contributing to rising demand across primary care, acute services and specialist treatment.

Our strategic priorities centre on strengthening prevention by deepening our understanding of increasing risk drinkers, and using data and behavioural insight



Karen Tyrell, chief executive, Drinkaware

to design more targeted and effective interventions.

Alongside this, we are responding to growing consumer interest in moderation. We support people to moderate by making small, sustainable changes using practical techniques such as 'zebra striping' (alternating between alcoholic and non-alcoholic drinks), building in regular drink-free days, and choosing low- and no-alcohol alternatives. These strategies help reduce overall consumption without requiring drastic change, making moderation more achievable and realistic for many people.

By 2030, our ambition is clear: to see two million fewer risky drinkers in the UK. Achieving this will require sustained collaboration across government, public health, industry and communities, but it presents a significant opportunity to reduce avoidable harm and support a healthier population.

SUPPORTING THE NHS AGENDA

The NHS 10-year plan for England places prevention and community-based care at its core, with alcohol identified as a key area for action.

In relation to alcohol, the plan commits to supporting the growth of the low- and no-alcohol category, introducing mandatory labelling on alcoholic drinks and strengthening community-level initiatives that reduce alcohol harm.

Drinkaware's work aligns closely with this direction. By providing accessible digital tools, brief intervention models and evidence-led information and advice, we support people to better understand their drinking and take action where needed.

Nurses and frontline healthcare professionals are uniquely positioned to identify risk early, deliver brief interventions and support patients to make meaningful lifestyle changes. However, time constraints and competing priorities can make this challenging. This is where Drinkaware can help by extending prevention beyond the consultation and providing



patients with accessible, evidence-based support in their own time.

PRACTICAL TOOLS FOR PATIENTS AND PROFESSIONALS

Drinkaware offers a suite of digital tools designed to support behaviour change. Many of these can be easily incorporated into conversations in primary care settings, empowering patients to take ownership of their drinking habits and make sustainable changes.

The Drinking Check is based on the World Health Organization's Alcohol Use Disorders Identification Test (AUDIT). It provides a quick, confidential way for individuals to understand their level of risk, with tailored advice based on their score. For increasing risk drinkers, it offers practical steps to cut down; for higher risk individuals, it signposts to further support.

The MyDrinkaware app supports ongoing behaviour change. Users can track their alcohol intake, units, calories and even sleep patterns, while setting goals such as drink-free days or weekly limits. Visualising consumption over time can be a powerful motivator.

The Unit and Calorie Calculator helps address a common barrier to change: misunderstanding of what constitutes a unit. By allowing users to input specific drinks and quantities, it provides clear, personalised feedback that supports informed decision-making.

The Service Finder ensures that those who need more structured support can access appropriate local services. Navigating alcohol support

pathways can be complex; this tool simplifies the process, directing users to relevant services within their area.

Alongside our digital offer, Drinkaware actively supports and learns from local alcohol prevention initiatives taking place across communities. Local projects are often best placed to respond to specific needs, inequalities and cultural contexts, and can play a vital role in engaging people who may not encounter alcohol advice through traditional healthcare settings. We welcome opportunities to connect with anyone delivering innovative or effective local work on alcohol prevention, early intervention or awareness. By sharing learning and amplifying what works at a local level, we can strengthen collective impact and help ensure prevention efforts reach diverse communities in meaningful, relevant ways.

To get in touch, or explore Drinkaware's tools, data and resources, visit: www.drinkaware.co.uk **GPN**

More information...

Drinkaware in numbers in 2025:

470,447 completions of our Drinking Check of which 352,746 were risky drinkers
2,180,960 people visited our website to view our fact pages, advice and support, or tools
62,886 downloads of our MyDrinkaware app with 21,918 drink-free days tracked
7,256 people took part in our UK-wide 2025 Drinkaware Monitor survey
269 NHS organisations downloaded or purchased items from the Drinkaware shop

Treating patients with wounds and skin conditions

Healing wrapped up: role of zinc paste bandages in practice

General practice nurses (GPNs) across the UK play a pivotal role in delivering frontline, patient-centred care, while frequently managing a diverse and often complex caseload. Among their many responsibilities, the assessment and treatment of patients with wounds and skin conditions may form a significant and consistent part of routine practice, ranging from chronic leg ulcers and pressure damage to eczema, dermatitis, and minor injuries. Having worked in primary care for over two decades, the author has observed a significant increase in the number of nurses routinely involved in the assessment, treatment and management of patients presenting with a wide range of chronic wounds and skin conditions on a daily basis (Armstrong, 2017).

This article considers some of the wounds and skin conditions that nurses manage and explores how zinc oxide and ichthammol products, Ichthopaste, Viscopaste and Zipzoc, may be used to manage these patients with the aid of a product selector guide.



“... patients often report that damaged skin can frequently make compression therapy feel uncomfortable or even intolerable, particularly when bandages or stockings exacerbate itching, trap moisture and become malodorous.

CHRONIC VENOUS DISEASE AND LEG ULCERS

In primary care, problems with venous leg ulceration are extremely common and it is thought that around only 53% of patients heal fully within one year (Guest et al, 2018). This figure represents a significant number of patients and therefore a large proportion of nursing and clinic time. Chronic venous disease (CVD) affects a substantial proportion of the adult population and is a leading cause of ulceration (Rabe et al, 2020). Venous aetiology leg ulcers often develop and represent up to 70% of chronic lower-limb wounds, which are commonly managed by nurses working in primary care (Guest et al, 2018). In the author's clinical opinion, the healing of these wounds is often prolonged, and recurrence rates remain high despite advances in compression systems and wound dressings.

In addition to ulceration, patients often experience skin

disorders because of chronic venous insufficiency (CVI). Thus, to improve outcomes, there is a need for nurses to heal not only the wound, but also to manage the whole limb in respect of dermatological issues, i.e. wet, itchy varicose eczema, hyperkeratosis, dermatitis and fungal infection, to name a few.

CVD results from sustained venous hypertension caused by valvular incompetence, venous obstruction, or impaired calf muscle pump function (Eberhardt and Raffetto, 2014). This leads to increased capillary permeability, oedema, and the release of inflammatory mediators. Over time, these processes result in characteristic skin changes, including venous eczema, hyperpigmentation, lipodermatosclerosis, and ulceration (Parsi, 2007).

Venous eczema or stasis dermatitis is particularly problematic for many patients, presenting with erythema, scaling, weeping, and intense pruritus. This can impact the patient in terms of their mobility and overall quality of life (Lev-Tov et al, 2025). In addition to the potential for a negative self-image, these symptoms of the skin may significantly reduce patient comfort and tolerance of prescribed compression therapy (Moffatt et al, 2007).

In the author's clinical experience, patients often report that damaged skin can frequently make compression therapy feel uncomfortable or even intolerable, particularly when bandages or stockings exacerbate itching, trap moisture and become malodorous. As a result, patients may be less willing or able to wear compression consistently, therefore reducing concordance with treatment

Janine Davies, consultant clinical sales and marketing manager, Evolan Pharma

ICHTHOPASTE™ VISCOPASTE™ PB7

Choose a tried
and trusted zinc
paste bandage
for your patients
healing journey.

Clinical Confidence with Viscopaste & Ichthopaste

When managing compromised skin, clarity matters. Did you know that Viscopaste and Ichthopaste bandages are specifically designed for use on open wounds or damaged skin, delivering soothing, consistent paste coverage exactly where it's needed most? With a clinical heritage of over 50 years, their trusted formulations support effective skin management while conforming comfortably and staying securely in place.

In real-world practice, skin isn't always intact. When treatment decisions are already complex, don't let your bandage choice narrow your options. Some bandages are designed just for support, whereas Viscopaste and Ichthopaste are specifically formulated to assist with the healing of open wounds and damaged skin.

- Viscopaste & Ichthopaste are **much more than just support bandages**
- **May actively promote healing** when used on open wounds and damaged skin
- **Primary dressing** – no protective dressings are required beneath the bandages
- **No Doppler or vascular assessment** required prior to use**
- Provides even **consistent zinc paste coverage**
- For use with **simple retention** bandages or under **compression therapy**



Ichthopaste
6.32% Zinc Oxide
2% Ichthammol



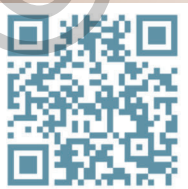
Viscopaste
10% Zinc Oxide

NHS Catalogue
Ichthopaste 7.5cm x 6m
Viscopaste 7.5cm x 6m

FP10 Drug Tariff
Ichthopaste 7.5cm x 6m
Viscopaste 7.5cm x 6m

Order Code
EFA 051
EFA 011

PIP Code
033-2668
033-2734



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E pastebandages@evolان.se
T +44 (0)7554133321

EVOLAN.

** Viscopaste and Ichthopaste Bandages may be used on adults and children to treat and manage chronic wounds and dermatological conditions. A Doppler Test or vascular assessment is not normally required if using the bandages independently; however, if compression therapy is to be applied over a paste bandage, the attending clinician should carry out a vascular assessment as per their own compression therapy guidelines.

and potentially delaying healing and long-term venous disease management. Thus, effective nursing management requires interventions that address both the underlying venous pathology and the inflammatory skin response (Moffatt et al, 2009).

THE PROBLEM WITH SKIN

Skin diseases are among the most frequently encountered conditions in primary care with up to 30% of all GP consultations having some element of skin problem mentioned (Primary Care Dermatology Society [PCDS], 2024a). There are many types of eczema which can affect people throughout their lifespan – from young to old (Van Onselen, 2020), creating long-term conditions which must be managed, and patients who may need ongoing support with regular flares of skin disorders. Other dermatoses, such as psoriasis, are common. Psoriasis is a genetically determined, inflammatory and proliferative disorder of the skin which can impact on physical, psychological and social wellbeing of the patient (PCDS, 2024b). For nurses working in primary care, the list of possible dermatological conditions to manage can be extensive.

Add to this an ageing population with a rising prevalence of long-term conditions, it is not uncommon for GPNs to see multiple patients each day requiring ongoing skin and wound management, necessitating both clinical expertise and efficient, reliable treatment options. Changes related to intrinsic ageing are largely unpreventable, as they are innate resulting in structural and functional changes in the epidermis and dermis that places skin at increased risk of damage (Farage et al, 2013).

Conditions such as lower limb cellulitis; a common bacterial infection of the skin and subcutaneous tissue, are often first seen in primary care. Cellulitis typically presents with unilateral redness, warmth, swelling, pain, and sometimes systemic symptoms such as fever or malaise (British Lymphology Society [BLS], 2016).



Breaks in the skin, such as ulcers, fungal infections, or trauma, are common entry points for bacteria (usually streptococci or staphylococci). Nurses must assess severity, check for red flags (e.g. rapidly spreading erythema, sepsis signs, or necrotising infection), and support prompt initiation of antibiotics as prescribed. Care should be taken not to confuse cellulitis with more general 'red leg syndrome' (Green, 2020). Patient education is also essential, encouraging limb elevation, good skin care, hydration, and adherence to treatment to reduce complications and recurrence.

Often the initial point of contact for patients of all ages, primary care nurses have a crucial role in ensuring that comprehensive holistic assessment is carried out and the most appropriate treatment administered for their patient (Armstrong, 2017) and/or referral to other services.

There is a myriad of different types of emollient therapies and dressing products available to clinicians, some new and some older. In the author's clinical experience, this can cause confusion for caregivers in selecting the most appropriate products. In this context, long established zinc oxide-based solutions, such as Viscopaste, Ichthopaste, and Zipzoc, continue to support patient care, offering practical and effective options for protecting, soothing, and promoting healing in compromised skin (Evolan Pharma 2026).

MAKING PRODUCT SELECTION EASY

Viscopaste PB7 and Ichthopaste Bandages and Zipzoc Medicated Stocking have been used by clinicians for decades to treat patients successfully. However, despite their longevity in the armoury of many professionals, there is often still some uncertainty around product selection, and Evolan is often asked... 'how do I know which product to choose for my patient?' Despite using the products for many years, clinicians and patients are often unable to explain the specific modes of action of zinc oxide and ichthammol. This can result in a knowledge gap in relation to product choice and the healing success that they observe. This article provides a better understanding of when it might be desirable to choose one of these products over another, and looks at the main raw ingredients – zinc oxide and ichthammol.

ZINC OXIDE

Zinc is a metallic trace element which is essential for health, second only to iron as the most abundant in the human body. Around one-fifth of our total zinc content is contained within our skin, with the epidermis containing five to six times more than the dermal layer (Maher, 2015).

Zinc is important for many functions in the body, including growth and development, immune function and antibody production, and tissue maintenance and wound healing (Agren, 1990; Kogan et al, 2017). It is located intracellularly

and in the extracellular matrix (ECM) of the skin in the form of protein complexes, where its role is to stabilise cell components and membranes to aid cell division, migration and maturation, which are all a vital part of the wound healing trajectory (Lansdown et al, 2007). When investigations were carried out into pathological zinc deficiencies, it was found that zinc plays a major role in regulating every phase of the wound healing process, ranging from cell membrane repair, coagulation, inflammation and immune defence, tissue re-epithelialisation, angiogenesis, and fibrosis/scar formation (Lin et al, 2018). It could therefore be considered that with huge demands for improved wound care, zinc oxide-based products may be helpful in accelerating the healing process of skin and wounds.

ICHTHAMMOL

One of Ichthopaste Bandages' active ingredients, ichthammol 2%, is a multi-component molecular mixture which is derived from sulfonated shale oil (SSO) (Ichthyol-Gesellschaft, 2026), which has been used in dermatology departments since the nineteenth century. For decades, ichthammol has been employed in healthcare for the treatment of eczema, dermatitis, psoriasis, leg ulcers and furuncles and today it remains an important medicament in the armoury of dermatologists (Boyd, 2010). Gayko et al (2000) refer to the actions of ichthammol, stating that its application for the treatment of inflammatory skin conditions has been well established all over the world, since the work carried out by Paul Unna (1882) (cited in Boyd, 2010). Besides its ability to treat inflammatory skin disorders, ichthammol possesses antibacterial, antimycotic, and anti-pruriginous actions (Gayko et al, 2000) and is therefore useful in treating wet, itchy eczema and other skin conditions such as dermatitis and psoriasis, helping to break the itch-scratch cycle (Boyd, 2010; Eagle, 1999; Williams, 1999).

Dermatology practitioners may remember that in the days

Table 1: Comparison of Viscopaste, Zipzoc and Ichthopaste (Evolan Pharma, 2026)

Feature	Viscopaste/ Zipzoc	Ichthopaste
Key ingredient	■ Zinc oxide	■ Zinc oxide and ichthammol
Primary action	■ Soothing, protective	■ Anti-inflammatory, antimicrobial, antifungal
Typical indications	■ Venous eczema, sensitive skin, ulceration	■ Inflamed, lichenified or weeping eczema
Odour	■ Minimal	■ Characteristic ichthammol odour
Patient tolerance	■ Generally high	■ May be reduced in some patients

before antibiotics, retinoids, and corticosteroids, ichthammol held a prominent place in their departments for cutaneous disease, for a simple reason – it worked! (Boyd, 2010). The use of ichthammol allows dermatologists an extra therapeutic option which, in the author's opinion, is relatively inexpensive, non-toxic and usually efficacious.

WHICH PRODUCT AND WHEN?

All three of Evolan's zinc-based products, Viscopaste and Ichthopaste Bandages and Zipzoc Medicated Stocking, essentially have the same indications, i.e. the treatment of venous leg ulcerations, chronic wounds and skin conditions associated with venous aetiology, in addition to the management of a myriad of different dermatoses, such as eczema, psoriasis and dermatitis. There are, however, some subtle differences (*Table 1*). All three products contain zinc oxide and can be used on open wounds and damaged skin. The zinc oxide ensures that all three products are soothing and promote healing, but they each have different forms and uses. Choosing the right one depends on the specific condition presenting, how easy you want application to be, or whether you may need certain properties, e.g. more antiseptic action. The product selection guide (*overleaf*) demonstrates where you might use each product to best effect, however thorough assessment of the patient and professional clinical judgement should always take place* (Evolan Pharma, 2026).

If treating a patient with venous ulceration, no infection, but with some inflammation or dermatitis

present, Viscopaste Bandage or Zipzoc will provide a simple zinc oxide treatment for that patient, with or without compression therapy** applied. Both products give a soothing and comforting treatment to settle inflammation and mild skin eruptions.

If a patient has a venous ulcer, some inflammation with potential mild infection, plus skin irritations such as weepy eczema or hyperkeratosis, the antiseptic action of Ichthopaste Bandage may be the best clinical choice. Ichthammol within Ichthopaste Bandage also has anti-fungal and anti-pruritic actions and will therefore be suited to some patients who are troubled with athletes' foot, for example, or those who are prone to scratching and where you need to break the itch-scratch cycle (Beckert, 2006). As a general guide, any patient with a considerable number of dermatoses to manage could potentially respond better to zinc oxide with added ichthammol, i.e. Ichthopaste Bandage.

If treating a patient with venous ulceration, or varicose eczema and a quick, clean and consistent application technique is needed, or a method where the patient can apply some self-care, then Zipzoc Medicated Stocking is an appropriate alternative to the bandages. Zipzoc is a single layer of elasticated fabric impregnated with 20% Zinc Oxide ointment and may be less bulky under compression therapy. Zipzoc is also preservative free, so it is a good option for those patients who are sensitive to many other products and their ingredients (Torfs and Brackman, 2021; Evolan Pharma, 2026).

For skin. For wounds. For you.

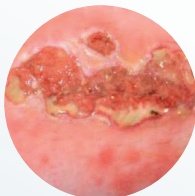
Therapeutic Zinc Oxide bandages and stocking may help with the treatment and management of wounds and skin conditions. Our products are impregnated with a paste containing Zinc Oxide or Zinc Oxide with Ichthammol. Selecting the right product is key to achieving the best possible outcomes. Below is a product selection guide.

VISCOPASTE™ PB7

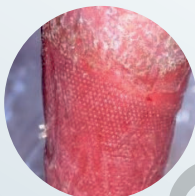


10% Zinc Oxide

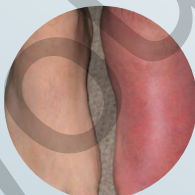
Zinc Oxide plays an important role in maintaining the structure of cells and the integrity of the skin, which means it aids the healing of ulcerations and wounds. It adds moisture to aid autolytic debridement



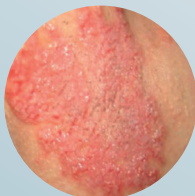
Zinc oxide is a soothing and cooling ingredient that helps to relieve skin irritation. It has anti-inflammatory and anti-microbial properties to calm inflamed tissues. It can be useful for dry skin, macerated tissue, sore and excoriated areas, such as dermatitis.



The anti-inflammatory properties of Zinc Oxide may help to settle inflamed areas of dryer skin, which have been caused by cellulitis or red leg syndrome.



Chronic dermatological conditions e.g. eczema and psoriasis can be improved by using Zinc Oxide. The soothing nature of the bandage adds moisture to itchy areas of tissue, providing comfort and relief for sufferers.

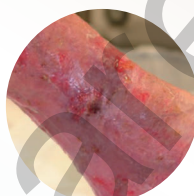


ICHTHOPASTE™

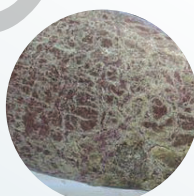


6.32% Zinc Oxide with 2% Ichthammol

Ichthammol is an ingredient which has been used in dermatology for decades. Due to its astringent properties, it is useful when treating patients presenting with conditions like wet and weepy varicose eczema, maceration, and dermatitis.



As Ichthammol is an oil-based ingredient, it can help to reduce excessive hardening of the skin and is valuable where there is a large amount of hyperkeratotic tissue or in chronic lichenified conditions where plaques need to be softened and removed, e.g. in eczema & dermatoses.



Ichthopaste has anti-fungal properties. Fungal areas can be dressed using the product to prevent cracks and fissures occurring, which can then lead on to lower limb bacterial infections, like cellulitis.



If itch is a problem, Ichthopaste has anti-pruritic properties and can help to break the itch-scratch cycle, preventing further damage by scratching



ZIPZOC™



Medicated Stocking – 20% Zinc Oxide

ZIPZOC Medicated Stocking has the highest level of Zinc Oxide of all our products, and can be used to treat leg ulcers, and their associated skin conditions, in the same way as our bandages.



ZIPZOC is a preservative free option and therefore is a good choice for those patients who react to many different products, creams or ointments, as the potential for allergy is reduced.



When self-care is an important factor for patients, ZIPZOC can really help them maintain their own activities of daily living, aiding independence, and quality of life.



ZIPZOC can also save time on dressing changes for the treating clinician, freeing up time and saving on costs.



ZIPZOC prescribing information. Zinc Oxide medicated stocking **Abbreviated prescribing information. Refer to summary of product characteristics before prescribing:** **Composition:** A sterile rayon stocking impregnated with an ointment containing 20% Zinc Oxide. Each stocking (90cm x 7cm) contains about 41.5g of ointment. **Therapeutic indications:** Aid to the treatment of chronic leg ulcers and other associated skin conditions. **Method of Administration:** Because ZIPZOC is preservative free, it must be changed no less frequently than weekly. For topical application, ZIPZOC should be applied to cover the lower leg from the base of the toes to below the knee. All folds should be smoothed out. To protect clothing, a suitable outer bandage should be worn. If chronic venous insufficiency exists, ZIPZOC may be used as a primary contact layer under compression therapy and may be left in situ for one week, before re-application. **Contra-indications:** Arterial leg ulcers. Known hypersensitivity to zinc oxide or the excipients in the ointment. **Special Warnings and Special Precautions:** None known. **Interactions:** None known. **Pregnancy and Lactation:** There is no evidence to suggest ZIPZOC should not be used during pregnancy. **Undesirable Effects:** The skin of leg ulcer patients is easily sensitised to some topical medications. ZIPZOC contains no preservatives thereby reducing the risk of skin reactions. Reported reactions include, rash, erythema, itching and maceration of the wound edge. If the outer bandage is inappropriate or the medicated stocking is not changed with sufficient frequency it can cause the stocking to dry out. **Excipients:** Liquid Paraffin BP, Eur. White Soft Paraffin BP. **Incompatibilities:** None reported. **Shelf Life:** 3 years. **Storage:** At or below 30°C. Keep all medicines out of the reach of children. **Packaging:** Polyethylene aluminium foil laminated pouches, each pouch containing a single medicated stocking. The outer carton will contain either 4 or 10 pouches. **Legal Category:** P **Market authorization number:** PL44616/0002 **Date of first authorisation/renewal of the authorisation:** 01 October 2006 **Date of revision of text:** 26 October 2018 **Trade Mark of:** Evolan Pharma AB **Date of preparation:** October 2018

CONCLUSION

All three products, Viscopaste, Ichthopaste and Zipzoc Medicated Stocking, provide a simple and convenient method of delivering zinc oxide and ichthammol to the skin and wound as a primary dressing. When applied to the skin, zinc oxide forms a physical barrier that helps shield damaged or vulnerable tissue from external irritants such as moisture, friction, and bacteria, which is particularly beneficial in conditions like leg ulcers, eczema, and incontinence-associated dermatitis.

In addition to this barrier function, zinc oxide supports the skin's natural healing processes by maintaining a moist wound environment, an essential factor in promoting tissue repair, while also helping to reduce inflammation and irritation. For patients, this can translate into improved comfort, reduced itching or soreness, and a more favourable environment for healing, making zinc oxide-based treatments a practical choice in everyday clinical care. With different application techniques giving flexibility for a variety of conditions, the products can be a valuable addition to a wound care formulary.

*Not all products are suitable for all patients and therefore the product selection guide opposite is intended as a guide only. Every patient must be assessed by an appropriately qualified person. Also refer to the instructions for use. One of the functions of occlusive bandages is to increase absorption. Care must be taken if it is decided to apply topical steroid, anaesthetic, antimicrobial or retinoid preparations under the bandage as their absorption may be significantly increased, leading to a shorter duration of effect. Ichthammol may increase the absorption of corticosteroids, heparin and chloramphenicol through the skin. Ichthammol has also been shown to synergise the activity of oxytetracycline and antagonise the activity of ampicillin when present together in various ointment bases.

** Zinc Paste Bandages and Stockings may be used as a primary dressing underneath graduated compression

therapy in the management of venous leg ulcers. If compression therapy is to be applied, it is the responsibility of the clinician to undertake an appropriate vascular assessment before application. Vascular assessment is not required to use Evolan's zinc oxide products only with simple retention products that do not apply compression. **GPN**

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Understanding urinary incontinence in postmenopausal women

Urinary incontinence (UI) is a common and frequently under-recognised condition among postmenopausal women and may significantly affect physical comfort, psychological wellbeing and social participation. Many women delay seeking help because of embarrassment, stigma and the belief that UI is an inevitable consequence of ageing. This review explores the pathophysiological mechanisms, psychological and physical burden, social implications and barriers to help-seeking. The implications for primary care assessment and management are clear as general practice nurses (GPNs) and general practitioners (GPs) are well placed to identify unreported urinary symptoms, provide support and initiate early intervention.

KEY WORDS:

- Urinary incontinence
- Menopause
- Postmenopausal women
- Pelvic floor dysfunction
- Quality of life
- Primary care

Hasan H Alsararatee

Advanced practitioner in Acute Medicine and Same Day Emergency Care, University Hospitals of Northamptonshire, UK; senior lecturer in Advanced Practice, Buckinghamshire New University



Photograph: Tolikoff Photography/Shutterstock

Urinary incontinence (UI) is a common and often distressing condition that remains under-recognised in routine clinical practice, particularly among postmenopausal women, despite evidence demonstrating its significant impact on quality of life and daily activities (Pizzol et al, 2021; Demirtaş et al, 2022; Shabani et al, 2023). The condition affects a significant proportion of women, especially after menopause, with more than half of postmenopausal women experiencing some degree of urinary leakage (Office on Women's Health, 2025).

UI occurs approximately twice as frequently in women as in men (Kołodnyńska et al, 2019). Prevalence also increases with age, affecting around 20–30% of younger women, 30–40% of middle-aged women and up to 50% of women in older age groups (Kołodnyńska et al, 2019).

“... UI in women is associated with impaired quality of life, embarrassment, reduced confidence and sexual wellbeing, and avoidance of social activities.

Although UI is frequently explored in relation to symptom severity, pad use and treatment response, its wider effect on daily life is often less fully explored. This is problematic because UI in women is associated with impaired quality of life, embarrassment, reduced confidence and sexual wellbeing, and avoidance of social activities (Pizzol et al, 2021; Demirtaş et al, 2022; Shabani et al, 2023). In older women, UI has also been linked to falls, formation of pressure ulcers, and mortality during secondary care admission, indicating that it should not be regarded as a

minor or purely hygienic complaint (McMillan et al, 2023).

For postmenopausal women, UI sits within a broader context of physiological, psychological and social change. Menopause is defined as the permanent cessation of menses after 12 consecutive months without menstruation, reflecting the end of ovarian reproductive activity (Crandall et al, 2023; Gatenby and Simpson, 2024). During and after this transition, declining oestrogen levels, pelvic floor weakness and changes in lower urinary tract function may contribute to increased urinary frequency, urgency and stress UI (Santoro et al, 2021; Talaulikar, 2022). The effect is not only biological, but postmenopausal women may also interpret UI as evidence of bodily decline, ageing or loss of control, and these meanings can shape whether they seek help, how they cope and how severely symptoms affect quality of life.

This review explores the clinical significance of UI in postmenopausal women, with attention to symptom burden, lived experience, barriers to care and the implications for clinical assessment and management. This perspective is important because UI remains under-recognised in clinical practice, while many women delay seeking help because of embarrassment and the belief that symptoms are an inevitable consequence of ageing (Elenskaia et al, 2011; Pizzol et al, 2021; Rashidi Fakari et al, 2021).

In addition, the review considers the relevance of UI to primary care, the menopausal physiological mechanisms contributing to continence problems, and the psychological, physical, social and relational effects associated with the condition.

WHY UI IN POSTMENOPAUSAL WOMEN MATTERS IN PRIMARY CARE

UI is highly relevant to primary care because it is common, often chronic and frequently under-reported (Charette et al, 2024). Women may present with urgency, frequency, nocturia, stress leakage or mixed symptoms, yet many do not initially disclose urine loss unless asked about it directly. Elenskaia et al (2011) described UI as a major source of shame and embarrassment, while Brodsky et al (2024) showed that urinary symptoms can be accompanied by stigma, isolation and concealment.

In practice, this means that general practice nurses (GPNs) and general practitioners (GPs) may miss significant symptom burden if continence is not explored sensitively and explicitly. The postmenopausal period warrants specific attention because urinary symptoms often intensify during this phase. Santoro et al (2021) and Talaulikar (2022) describe the menopausal transition as a period characterised by endocrine, urogenital and systemic change. Crandall et al (2023) and Gatenby and Simpson (2024) similarly noted that menopause is accompanied by symptoms that can

affect urinary health, sexual function and general wellbeing.

Quantitative evidence supports the clinical importance of UI in this group. Pakgohar et al (2014) found poorer quality of life among postmenopausal women with UI, while Demirtaş et al (2022) showed that urinary symptoms and incontinence negatively affect quality of life in postmenopausal women. Shabani et al (2023) demonstrated a relationship between UI, reduced sexual function and poorer quality of life.

These findings indicate that UI in postmenopausal women should not be considered to be an isolated bladder problem. It is better understood as a multidimensional clinical issue affecting physical comfort, emotional wellbeing, self-image, relationships and participation in daily life. This broader framing is particularly important in primary care, where GPNs and GPs are well placed to identify under-reported symptoms, consider coexisting menopausal concerns, and initiate early, non-judgemental support.

PATHOPHYSIOLOGY AND MENOPAUSAL MECHANISMS

The biological basis of UI in postmenopausal women is well recognised (Mckie and Stanton, 2025). As oestrogen levels fall, urogenital tissues undergo structural and functional change (Mckie and Stanton, 2025). Reduced urethral mucosal coaptation, altered collagen support, changes in pelvic connective tissue and weakening of the pelvic floor may all contribute to continence problems after menopause (Santoro et al, 2021; Crandall et al, 2023).

Talaulikar (2022) highlighted that menopausal physiology affects several systems, including the genitourinary tract, while Gatenby and Simpson (2024) emphasise the variability of menopausal symptoms and their effect on daily life. These physiological changes are reflected in epidemiological and review evidence. A systematic review by

Practice point

The experience of urinary incontinence extends beyond biological mechanisms and frequently includes emotional distress, loss of confidence, disruption to daily activities and concerns regarding intimacy and personal relationships.

Allafi et al (2024) concluded that menopause is linked with UI and that reduced oestrogen, pelvic floor weakening and bladder changes are plausible mechanisms. Demirtaş et al (2022) reported that urinary symptoms are common in postmenopausal women and have measurable consequences for quality of life. Alizadeh et al (2023) also highlighted the prevalence and severity of UI in Iranian postmenopausal women and identified associated factors, reinforcing that UI in this group is both common and clinically relevant.

However, explanations of UI based only on biomedical mechanisms overlook the psychological distress, social limitations and daily management challenges associated with the condition. Women do not experience reduced urethral closure pressure or pelvic support in abstract terms. They experience leakage during laughter, urgency before reaching the toilet, disturbed sleep, fear of odour, the need to carry pads, and concern that others may notice. Therefore, GPNs and GPs should integrate biological understanding with a broader appreciation of the lived burden experienced by women with UI.

PSYCHOLOGICAL BURDEN AND LOSS OF CONFIDENCE

Previous qualitative studies indicate that UI in postmenopausal women is associated with a considerable psychological burden, with women reporting feelings of embarrassment, fear, guilt, stress, sadness and anxiety in response to leakage episodes (Hamid et al, 2015; Pakgohar et al, 2015; Gabes et al, 2021; Million et

al, 2021). These emotional responses were not incidental. They shaped how women behaved, how they perceived themselves, and whether they engaged socially.

Hamid et al (2015) described UI as a 'stain in life', a phrase that captures both contamination and the lasting emotional mark of the condition. Similarly, Pakgohar et al (2015) reported feelings of helplessness, distress and altered self-worth. Million et al (2021) reported that UI altered women's sense of bodily control and their ability to structure and manage everyday activities, as participants described the unpredictability of leakage and the need to remain constantly attentive to bladder signals. Gabes et al (2021) found that some women organised their daily activities around the availability and proximity of toilets in order to maintain a sense of control and minimise the risk of public leakage. These findings illustrate that UI extends beyond a physical symptom and can significantly influence daily behaviour and self-management strategies.

From a clinical perspective, this is important because UI may undermine autonomy and confidence even when the observable volume of urine loss appears relatively modest. Evidence from other studies reinforces this interpretation. For instance, Pizzol et al (2021) demonstrated that UI is strongly associated with reduced quality of life, while Cheng et al (2020) identified a significant association between UI and symptoms of depression and anxiety. In addition, Brodsky et al (2024) highlighted that shame, embarrassment and stigma remain central components of experiencing urinary symptoms. These findings emphasise that the burden of UI is not only confined to physiological dysfunction, but also encompasses psychological and social consequences.

For GPNs and GPs, this has important implications for clinical assessment. Routine continence evaluation should extend beyond the measurement of symptom frequency



Figure 1.

GPNs and GPs should explore what women are doing independently to manage symptoms.

or volume and include exploration of emotional impact, fear of leakage, confidence and behavioural avoidance. Women whose primary concern relates to humiliation, stigma or fear of exposure may require a different clinical approach to those whose principal difficulty relates to the physical severity of urine leakage.

PHYSICAL BURDEN, HYGIENE AND FATIGUE

Although the emotional impact of UI is substantial, the physical burden should not be underestimated. Previous studies stated that women reported exhaustion from repeated toilet visits, pad changes, clothing changes and the constant effort of remaining clean and prepared (Hamid et al, 2015; Pakgohar et al, 2015). Gabes et al (2021) and Hamid et al (2015) also described bladder pressure, constant need to void, and sleep disruption. When these symptoms become persistent, they can produce tiredness, irritability and reduced resilience in day-to-day life.

Hygiene emerged as a recurrent concern. Million et al (2021), Pakgohar et al (2015) and Hamid et al (2015) all describe the repeated washing, cleaning and self-monitoring undertaken by women trying to avoid odour, discomfort, or visible evidence of leakage. Such practices may seem adaptive, but they can contribute to skin irritation, soreness and preoccupation with bodily cleanliness.

In older women, the clinical implications may be more serious. McMillan et al (2023) noted that UI in women aged 55 years and older is linked to adverse outcomes during hospital admission, including pressure ulcer formation and mortality. This reinforces the need for GPs and GPNs to consider UI as part of wider functional and frailty assessment.

Some women also adopted fluid or dietary restrictions to reduce the risk of leakage (Pakgohar et al, 2015). While understandable, these strategies may be clinically counterproductive if they result in dehydration, constipation or concentrated urine that worsens urgency. GPNs and GPs should therefore explore what women are doing independently to manage symptoms, as these behaviours often reveal both the extent of burden and the gaps in education they have experienced.

SOCIAL RESTRICTION AND EVERYDAY ADAPTATION

UI has a marked effect on social participation. In qualitative studies, women described reluctance to attend family events, hesitation about leaving home, and fear of leakage in front of others (Hamid et al, 2015; Pakgohar et al, 2015). The desire to remain socially engaged was constrained by anxiety, planning and self-surveillance. Such findings are important because they show that UI can gradually and invisibly erode

social confidence. Gabes et al (2021) offered a particularly useful clinical insight by showing that some women regarded access to toilets as the condition for being able to function normally. This form of adaptation can easily be overlooked. A woman may appear independent and coping well, yet her activities may in fact be tightly restricted by the need for constant preparation. In a qualitative study of rural women, Klein et al (2023) described similar patterns of constant worry and self-management.

UI thus creates not only episodic inconvenience, but also a persistent cognitive burden. This has practical implications for consultation. Asking whether symptoms stop a woman travelling, attending social events, exercising, shopping or visiting relatives may reveal disability not captured by standard continence questions. Primary care management should therefore recognise participation as a core clinical outcome, alongside leakage reduction.

INFORMATION NEEDS, AGEING BELIEFS AND HEALTH LITERACY

A consistent finding across the qualitative evidence is that postmenopausal women want better information about UI. Gabes et al (2021) and Million et al (2021) found that women wanted more education, more open discussion and a clearer understanding of what could be done. In contrast, many participants linked UI with normal ageing and therefore did not automatically view it as treatable (Hamid et al, 2015; Pakgohar et al, 2015; Gabes et al, 2021). This belief has important consequences for help-seeking.

Waetjen et al (2018) found that incontinent midlife women often did not seek treatment because they believed symptoms were not severe enough or were simply part of the menopausal transition. Vethanayagam et al (2017) similarly reported that older people may normalise UI and delay consultation. Rashidi Fakari et al (2021) showed that help-seeking is shaped by cultural norms, embarrassment, knowledge deficits and concerns

about healthcare interaction. By contrast, Kinchen et al (2003) found that women were more likely to seek treatment when UI had a greater effect on daily life.

“Because shame and the normalisation of symptoms often suppress disclosure, GPNs and GPs should ask directly but sensitively about urine leakage, urgency, nocturia, pad use, sleep disturbance and the impact on daily life.

For GPNs and GPs, the implication is clear: providing patients with appropriate information and guidance should be regarded as a central therapeutic intervention rather than a minor adjunct to treatment. Women need to hear that UI is common but not inevitable, that non-surgical and surgical options for treatment exist, and that management can be focused to symptom type and individual priorities. Vaughan and Markland (2020) outlined practical clinical management options for women with UI, while Kim et al (2020) summarised surgical approaches for selected cases of stress UI. Yet, the existence of such options is of little use if women believe that they should simply endure symptoms as part of getting older.

INTIMACY, SEXUALITY AND RELATIONSHIPS

UI also has a meaningful effect on intimate relationships, an area that remains under-discussed in many consultations. Previous qualitative studies found that women described reduced spontaneity, fear of leakage during intercourse and the use of excuses to avoid intimacy (Hamid et al, 2015; Gabes et al, 2021). These findings suggest that UI not only interferes with sexual activity

mechanically, but can also reshape desire, anticipation and relational closeness.

This pattern is also reflected in quantitative research. For example, Shabani et al (2023) identified a relationship between UI, sexual dysfunction and poorer quality of life among postmenopausal women, while Mohamed et al (2023) similarly reported reduced sexual function and lower quality of life in postmenopausal women experiencing UI. In practice, many women may not raise this issue unless specifically invited. Sensitive enquiry is therefore warranted, especially when women report distress, avoidance or worsening menopausal symptoms. For GPNs and GPs, acknowledging sexual wellbeing as a legitimate part of continence care is essential to holistic practice.

CLINICAL IMPLICATIONS FOR ASSESSMENT AND MANAGEMENT

Current clinical guidance recommends conservative management as the first-line approach, including pelvic floor muscle training, lifestyle interventions and behavioural strategies before considering pharmacological or surgical treatments (European Menopause and Andropause Society, 2020; National Institute for Health and Care Excellence [NICE], 2025).

The Bladder and Bowel Community provides a free 'Just Can't Wait' toilet access card, which is widely recognised in public settings (www.bladderandbowel.org/free-just-cant-wait-card/). The card displays standard WC signage and allows individuals to discreetly indicate an urgent need to access toilet facilities when symptoms occur. This resource may be particularly helpful for women experiencing urgency or urge UI, as it can facilitate timely access to toilets in public places.

However, effective management begins with accurate recognition and assessment. Because shame and the normalisation of symptoms

often suppress disclosure, GPNs and GPs should ask directly but sensitively about urine leakage, urgency, nocturia, pad use, sleep disturbance and the impact on daily life. Assessment should also address fluid intake, bowel habit, mobility, medicines, prolapse symptoms, recurrent infection and red flags, while not neglecting emotional and relational effects.

Management should be individualised and grounded in symptom type, burden and patient priorities. Conservative measures remain central. Vaughan and Markland (2020) identified pelvic floor muscle training, bladder training, behavioural modification and treatment of contributory factors as key first-line approaches. Weight management, constipation management, medication review and continence product advice may all have a role. In women with stress UI refractory to conservative treatment, surgical options may be considered following appropriate specialist assessment (Kim et al, 2020).

However, previous studies indicated that technical treatment alone was insufficient. Women frequently describe feelings of shame, embarrassment and silence surrounding urinary symptoms and often require reassurance that their experiences are legitimate and worthy of clinical attention (Elenskaia et al, 2011; Hamid et al, 2015; Pakgohar et al, 2015). Women value opportunities to discuss coping strategies, practical management and concerns related to intimacy within a supportive clinical environment (Gabes et al, 2021; Million et al, 2021). In addition, stigma and self-blame remain prominent features of the urinary symptom experience, reinforcing the importance of empathetic and informed consultations (Rashidi Fakari et al, 2021; Brodsky et al, 2024).

CONCLUSION

UI in postmenopausal women is a clinically significant condition that extends beyond bladder dysfunction. The evidence demonstrates that UI influences psychological wellbeing,

social participation, daily functioning and intimate relationships. Although menopausal physiological changes contribute to continence problems, many women delay seeking help because symptoms are normalised as part of ageing or associated with embarrassment and stigma. Consequently, UI often remains under-recognised in routine clinical practice.

For GPNs and GPs, early recognition and holistic assessment are essential. Effective continence care requires sensitive enquiry about symptoms, acknowledgement of emotional and social effects, and clear guidance regarding management options. Conservative interventions such as pelvic floor muscle training, behavioural strategies and lifestyle modification remain central to management, yet their effectiveness depends on timely identification and patient-centred communication. Recognising UI as a multidimensional health issue enables GPNs and GPs to provide more responsive care and improve quality of life for postmenopausal women. **GPN**

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Revalidation Alert

Having read this article, reflect on:

- Do you routinely ask postmenopausal women about symptoms of urinary incontinence, including urgency, leakage or nocturia?
 - During assessment of urinary incontinence, do you explore emotional impact, embarrassment or social avoidance as well as symptom frequency?
 - How confident are you in discussing the potential effects of urinary incontinence on intimacy and sexual wellbeing?
 - What strategies do you use to reassure women that urinary incontinence is common but not an inevitable part of ageing?
 - How can your clinical practice improve early recognition and open discussion of urinary incontinence among postmenopausal women?
- ✓ Then, upload the article to the free GPN revalidation e-portfolio as evidence of your continued learning: www.journalofpracticenursing.co.uk/revalidation

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Key points

- Urinary incontinence is common in postmenopausal women but remains under-recognised because many individuals do not disclose symptoms unless directly asked about them.
- The burden of urinary incontinence extends beyond physical leakage and includes psychological distress, social restriction, altered self-confidence and effects on intimate relationships.
- Many postmenopausal women interpret urinary incontinence as a normal consequence of ageing, which contributes to delayed help-seeking and unmet care needs.
- GPNs and GPs should adopt a holistic continence assessment that explores emotional impact, daily functioning, coping strategies and sexual wellbeing alongside symptom severity.
- Conservative interventions, including pelvic floor muscle training, behavioural strategies and lifestyle modification, remain the first-line management approach, supported by patient education and empathetic consultation.

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Primary malignant brain cancers

Brain tumours can be primary, or secondary to a tumour which has developed elsewhere in the body. Primary malignant brain tumours are rare but are a devastating diagnosis for anyone affected due to their impact on neurological function, quality of life, and overall survival. Despite advances in treatment, prognosis and survival rates remain poor, with high rates of morbidity and mortality. The complex presentation of brain tumours can make early recognition difficult, and patients often experience a range of physical, cognitive and psychological symptoms that require comprehensive multidisciplinary management. This article discusses the disease in adults, outlining symptoms, diagnosis, and treatment, so that nurses and non-medical prescribers will feel more confident in advising and supporting patients and families when needed.

KEY WORDS:

- Brain tumour
- Glioma
- Metastatic brain cancer
- Symptoms
- Diagnosis
- Treatment

Margaret Perry

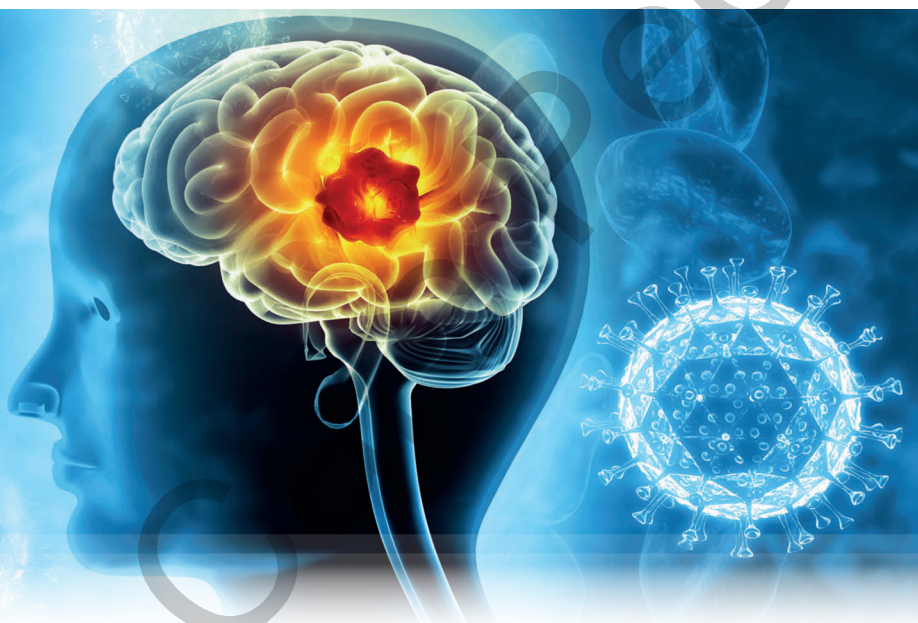
Locum advanced nurse practitioner

Brain cancers can be benign or malignant. The latter can occur as a primary lesion, originating in the brain itself, or can develop secondary to a cancer which has originated elsewhere in the body and spread (metastasised) to the brain. In any form, they are extremely distressing for the patient, family and friends, and have a huge impact on the wellbeing and quality of life of the affected person.

Primary malignant brain cancers can affect people of any age, but are most common in older adults, with approximately 25% diagnosed in those aged 75 years or older (Cancer Research UK, 2023). This article outlines primary malignant brain cancers in adults, and discusses metastases, giving nurses and non-medical prescribers more information about the symptoms, diagnosis, and treatment of this potentially fatal disease.

TYPES

In 2021, the World Health Organization (WHO) updated the classification of brain tumours and there are now over a hundred types (Louis et al, 2021). The update introduced several new tumour types



Photograph: crystal light/Shutterstock

and subtypes (many applicable to the paediatric population) with revised diagnostic criteria, aiming to improve treatment planning and therapy (Louis et al, 2021). In view of the vast number of tumour types, only a few of the most prevalent tumours seen in adults are discussed here.

Gliomas

Glioma is a general term used to describe primary brain tumours (can be both benign and malignant). These are classified according to their presumed cell of origin which includes astrocytic tumours (astrocytoma and glioblastoma), oligodendrogliomas, ependymomas, and mixed gliomas (Hanif et al, 2017) (see below for more information on subtypes).

Gliomas are the most commonly occurring tumours of the central nervous system (CNS), accounting for approximately 80–85% of malignant brain tumours. The highest-grade glioma, glioblastoma, is one of the most lethal cancers in adults (Schaff and Mellinghoff, 2024). Gliomas

originate from the glial cells of the brain and spinal cord and there are three types:

- Astrocytomas
- Glioblastomas
- Oligodendrogliomas

(Cancer Research UK, 2023).

Astrocytoma

This is the most common type of glioma, because the statistics relating to its prevalence include both benign and malignant types. Astrocytomas arise from astrocytes, the star-shaped glial cells found in the cerebrum, and malignant astrocytomas are more common, making up 60% of all brain tumours (Kapoor et al, 2024).

All brain tumours are graded from I to IV to help determine the degree of abnormality and guide the treatment needed (*Table 1*). Grade I astrocytomas are classified as benign, non-cancerous lesions (Louis et al, 2021). They usually do not penetrate or combine with surrounding tissues, and although they grow slowly, they may be relatively large (Macmillan

Cancer Support, 2024). The most common type of astrocytoma is the pilocytic astrocytoma, which is rare in adults, and more common in children, adolescents, and young adults (Mair et al, 2020). More information on grading is shown in *Table 1*.

Glioblastoma

Glioblastoma is a fast-growing (high grade) glioma, previously called glioblastoma multiforme or GBM. This is the most aggressive and malignant form of primary brain tumour originating from astrocytes. Classified as a grade IV astrocytoma by WHO, it is characterised by rapid proliferation, diffuse infiltration into surrounding brain tissue, and a high degree of genetic heterogeneity (the variation and diversity in genes within a population), which contributes to its resistance to conventional therapies such as surgery, radiation, and chemotherapy (Sipos et al, 2025).

The peak age of diagnosis typically occurs between 65 and 75 years, and the disease shows a slight male predominance, with men about 1.5 times more likely to develop glioblastoma than women. People of Caucasian descent tend to have a higher incidence compared to other populations (Sipos et al, 2025).

Oligodendroglioma

This is a rare brain tumour that develops from glial cells called oligodendrocytes (Cancer Research UK, 2023). They most commonly arise in the frontal lobe, occur more frequently in males and have a peak incidence in the fifth and sixth decade (Wesseling, 2015).

Practice points

- The updated classification means there are now over one hundred brain tumour types
- Brain tumours can be malignant or benign
- Glioblastoma is the most aggressive, malignant form of primary brain tumour
- Tumours can develop at any age but are most common in older adults.

Table 1. Grading malignant tumours (Cancer Research UK, 2023)	
Grade	Additional information
I	Low grade: classed as benign because cells are like normal cells and are usually slow growing and much less likely to spread
II	Slightly more abnormal in appearance. They are usually slow growing but can spread into nearby brain tissue. Can progress to grade III (malignant)
III	Cells are more abnormal in appearance. They can spread to other parts of the brain and the spinal cord. Grade III gliomas may also be called anaplastic tumours. They are classed as malignant
IV	This is classed as high grade and is the most aggressive type of tumour. This type grows rapidly, can spread to other parts of the brain and spinal cord, and often recurs after treatment

Metastatic brain cancers

Brain metastases arise from a wide variety of primary tumours and occur when cancer cells from the original primary tumour formed elsewhere in the body (e.g. the lungs or breast) spread to the brain. Patients may have already received several different treatments for their primary cancer, and resistance to multiple lines of therapy is a common problem (Sperduto et al, 2020). It is estimated that 10–45% of other primary cancers metastasise to the brain (Lah et al, 2020).

PREVALENCE

Many of the studies conducted to establish incidence and prevalence rates have looked at statistics for both benign and malignant lesions combined, making accurate statistics for malignant tumours difficult to determine. Over 12,000 people in the UK are diagnosed with a primary brain tumour every year, with incidence rates for brain, other CNS, and intracranial tumours in the UK highest in people aged 85–89 years of age (Cancer Research UK, 2023).

Ilic and Ilic (2023) studied global differences in the incidence rates of brain cancers and reported wide variations between populations, with the highest incidence found in Denmark (17.1 per 100,000) and the lowest found in Sao Tome and Principe (0.4 per 100,000). The incidence of brain cancer was more than threefold higher in central Europe than in the wealthier Asia Pacific region (Ilic and Ilic, 2023).

PATHOPHYSIOLOGY

The processes leading to symptoms are complex. Small, critically located

tumours may damage specific neural pathways traversing the brain, and can invade, infiltrate, or displace normal parenchymal tissue, disrupting normal function (Lo, 2022).

Because the brain is located within the skull, the growth of an intracranial tumour may cause oedema, resulting in raised intracranial pressure. Tumours located adjacent to the third and fourth ventricles may impede the flow of cerebrospinal fluid (CSF), leading to obstructive hydrocephalus. In addition, tumours may cause the growth of new blood vessels (angiogenesis), which can disrupt the normal blood–brain barrier and contribute to further oedema (Lo, 2022).

RISK FACTORS

Despite research, most malignant brain tumours are not linked with any known risk factors and have no obvious cause. However, some possible factors have been identified, including:

- Exposure to ionising radiation
- Infections, viruses, or allergens
- Environmental agents such as contaminated drinking water, and lead
- A weakened immune system (Huang et al, 2023).

Other less certain risk factors may include contact with solvents, pesticides, cell phones, rubber and oil products (Huang et al, 2023).

SIGNS AND SYMPTOMS

Patients may present with a wide range of symptoms, some of which may be relatively common and thought to be non-specific, leading to misdiagnosis and possible delay in treatment.

Symptoms caused by brain tumours can be physical (e.g. focal signs, fatigue, headaches) or behavioural (e.g. hallucinations, depression, anxiety, decreased attention and concentration, and memory problems), influenced by the site and size of the tumour (Comelli et al, 2017).

The headache associated with a tumour is classically thought of as severe, worse in the morning, and associated with nausea and vomiting. Patients presenting with a chronic, persistent headache with nausea, vomiting, seizures, changes in headache pattern, or positional worsening should prompt an evaluation for a possible brain tumour (Perkins and Liu, 2016). *Table 2* shows the initial symptoms experienced and their frequency.

DELAYED DIAGNOSIS

While some brain tumours are diagnosed quickly, the period between the onset of symptoms and diagnosis is at least 14 weeks in most studies (Alther et al, 2020). Penfold et al (2017) reported that 39% of brain cancer patients had three or more consultations with a GP before referral, and a third reported declining health while waiting to see a hospital doctor.

National primary care audit data reported similar findings, with longer diagnostic intervals related to multiple primary care consultations. A quarter of brain cancer patients who had three to four consultations waited longer than 62 days for a diagnosis, while those who

had five or more consultations waited approximately 166 days before diagnosis (Penfold et al, 2017).

DIAGNOSIS

National Institute for Health and Care Excellence (NICE) (2026) guidelines recommend an urgent magnetic resonance imaging (MRI) scan of the brain, or computed tomography (CT) if MRI is contraindicated, to be done within two weeks if there is suspicion of a brain tumour. Initial investigations in the primary care setting will include a thorough history of symptoms, their duration and severity, family history, past medical history, and current medications.

Initial investigations in primary care may also include:

- A neurological examination of the eyes and ears
- Checking reflexes
- Memory test
- Assessment of gait (Cancer Research UK, 2023).

If there is any concern, immediate referral on a two-week wait to a neurologist is needed, where further investigations will be undertaken.

Investigations performed in secondary care may include:

- **MRI with contrast:** MRI contributes significantly to diagnosis, playing a key role in treatment planning as well as evaluating treatment response and/or recurrence
- **CT scan:** this may be an option when MRI is unsuitable (e.g. in patients with metallic implants or those who have claustrophobia). CT scanning can offer more precise images of the skull, spine, and other bone structures close to a brain tumour at low cost, and is more widely available than MRI
- **Positron emission tomography and computed tomography (PET-CT):** this investigation uses a radioactive tracer to show up abnormal areas in the brain. This is combined with a series of X-rays to create a three-dimensional picture. It may be used alongside other investigations, such as CT or MRI, to give more detailed information about the abnormality

Red flags

- Signs and symptoms may be shared with other less serious diseases, making diagnosis difficult
- Delayed diagnosis is common
- Patients presenting with a chronic, persistent headache, nausea, vomiting, seizures, or changes in headache pattern should raise suspicion of a brain tumour.
- **Biopsy:** tissue samples are taken and can determine tumour type (Cancer Research UK, 2023; Kaifi, 2023).

Other investigations that may be required for diagnosis are shown in *Table 3*.

DIFFERENTIAL DIAGNOSIS

Unfortunately, testing cannot differentiate between primary brain tumours or metastatic disease. Where a metastatic tumour is suspected, determining the site of the primary tumour is often difficult, especially if there are no clues from the history and physical examination (Perkins and Liu, 2016). In these instances, a chest X-ray and CT scan of the abdomen may be helpful in finding the source of the primary tumour.

TREATMENT AND MANAGEMENT

Once the diagnosis has been established, treatment options will be discussed by the multidisciplinary team, which may include an oncologist, neurosurgeon, radiologist, pathologist, neurologist and specialist nurse. Treatment will be guided by factors including the tumour type and location, as well the patient's age and overall health status. Tumour grading (*Table 1*) assesses how abnormal the cancer cells look compared to healthy cells and provides an indication of how aggressive the tumour is likely to be. Unlike many other cancers, primary brain tumours are not usually staged, as staging is of limited value in determining their behaviour or treatment. Although brain tumours can spread to other parts of the brain or spinal cord, they rarely metastasise

Table 2. Initial symptoms and clinical findings experienced by patients with primary malignant brain tumours (Alther et al, 2020)

Symptom or clinical finding	Percentage of patients affected
Seizures	33%
Headaches	19%
Cognitive dysfunction	10%
Ataxia	6%
Visual disturbances	6%
Nausea and vomiting	5%
Aphasia	4%
Fatigue	4%
Paresis	2%

Table 3. Additional tests for diagnosis (Cancer Research UK, 2023; Kaifi, 2023)

Investigation	Additional information
Bloods	Routine bloods (e.g. full blood count, liver function tests, and urea and electrolytes)
Single photon emission computed tomography (SPECT)	This combines computed tomography with a radioactive tracer
Neuroendoscopy	Tissue samples can be taken from various areas of the brain including the ventricles, or the pineal regions (mid brain behind the brainstem)
Brain angiogram	This involves X-ray and injection of a contrast medium to highlight blood supply to the tumour and its proximity to major blood vessels
Lumbar puncture	A sample of cerebrospinal fluid is taken and tested for spread of cancer cells

beyond the CNS (Perkins and Liu, 2016). Treatment is generally as follows.

Surgery

Surgery is the preferred treatment, if it is a suitable option for the patient. The extent to which a tumour may be safely resected depends on tumour location, patient performance status, and, most importantly, patient age. If maximal resection is possible, this may improve survival rates (Perkins and Liu, 2016). Surgery, often followed by chemotherapy and radiotherapy, is considered the safest treatment option for primary brain tumours (Rasheed et al, 2021).

Radiotherapy

This may be used after surgery or on its own in patients where surgery is unsuitable. External beam radiotherapy is most frequently used and this may be given daily (Monday to Friday) for three to six weeks (Cancer Research UK, 2023). Small tumours may be treated with stereotactic radiotherapy – this delivers high doses to the tumour and smaller doses to the surrounding tissues.

Chemotherapy

This may be given after surgery to reduce the risk of recurrence or if the tumour has recurred. Many chemotherapy drugs are unable to cross the blood–brain barrier to reach the tumour. To overcome this, drugs may be directly delivered into the CSF in the brain via intracranial injection (Lee et al, 2025). In this case, minor surgery is required to insert a catheter into the ventricle of the brain to deliver the drug (Rasheed et al, 2021).

There are many chemotherapy drugs and treatment can be given via capsules taken at home, by intravenous injection,

or rarely the drug can be inserted into the brain during surgery (gliadel wafers) (Cancer Research UK, 2025).

COMPLICATIONS OF TREATMENT

All treatments offered have associated complications. Common ones include deep venous thrombosis, pulmonary embolism, intracranial bleeding, wound infection, systemic infection, seizure, depression, and worsening neurological status (Perkins and Liu, 2016). Radiotherapy side-effects may appear two to three weeks after starting treatment, and alopecia is the most common adverse effect (but this may resolve when treatment has been completed), followed by skin irritation (Rasheed et al, 2021).

Chemotherapy commonly causes nausea, vomiting and fatigue, which can be managed with anti-nausea medications and lifestyle adjustments such as small, frequent meals (Berthele, 2024).

RECURRENCE

Despite initial treatment with surgery, radiotherapy, and chemotherapy, recurrence can occur (De Pietro et al, 2023). The best treatment strategy for recurrent disease is unclear, and there is no standard treatment recommendation in this situation (Vaz-Salgado et al, 2023).

Re-resection is an option for some patients, and can alleviate symptoms. Common ones include deep venous thrombosis, pulmonary embolism, intracranial bleeding, wound infection, systemic infection, seizure, and depression (Weller et al 2023), and worsening recurrence (Zhou et al 2023). In addition, radiation may be

possible for some patients, but the risk of damage to healthy brain tissue limits its use because of the increased risk of radiation necrosis (Davis, 2016). Recurrence is a challenge to manage and unfortunately, surgery, re-irradiation and systemic chemotherapy provide only short-term disease control and modest survival rates (Mallick et al, 2016).

PROGNOSIS

Prognosis is affected by several factors, including the patient's age, the site and size of the tumour, the patient's general health status, tumour grade at diagnosis and the tumour type (Cancer Research UK 2023). Glioblastoma is the most common and aggressive brain tumour type in adults, and despite comprehensive treatment strategies, typical survival for newly diagnosed patients is 12–15 months with a two-year survival rate below 30% (Sipos et al, 2025).

In general, survival rates across all malignant primary brain cancer types are:

- Almost 50% survive their cancer for one year or more
- 25% survive their cancer for five years or more

Practice points

- Surgery, often followed by chemotherapy and radiotherapy, is considered the safest treatment option for primary brain tumours
- Recurrence is common and there is no standard treatment option if this occurs
- Surgery, re-irradiation, and systemic chemotherapy for recurrence provide only short-term disease control and limited survival rates
- Prognosis is influenced by a variety of factors, including patient age, tumour size, patient health status, and grade at diagnosis
- Younger patients tend to have better survival rates than older people
- Older patients often present with more aggressive tumour subtypes and comorbidities that limit treatment options, contributing to a poorer prognosis.

- Around 20% survive their cancer for 10 years or more (Cancer Research UK, 2023).

CONCLUSION

Primary malignant brain tumours are rare and comprise several types which can affect all age groups but are most common in older adults. Particularly confusing are the range of signs and symptoms, which can increase the risk of misdiagnosis as they are often associated with several other less serious conditions.

Despite advances in diagnosis and treatment options, brain cancers continue to have a poor prognosis and a poor life expectancy in many cases. Diagnosis is devastating for those affected, their family and friends, and has a huge impact on mental wellbeing and quality of life. With continued research and the development of new treatments, it is hoped that the long-term outcomes for those affected will improve.

This article provides nurses and non-medical prescribers with an understanding of the disease, its diagnosis and treatment options, enabling them to offer informed advice and support patients and their families when needed. **GPN**

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Acne in teenagers: an evidence-based review for primary care

Acne vulgaris is one of the most prevalent chronic inflammatory skin conditions affecting adolescents, with epidemiological data suggesting that up to 85% of individuals aged 12–18 years experience acne to some degree (Bhate and Williams, 2013). Although often regarded as a benign and self-limiting condition of puberty, acne may persist for several years and is associated with significant physical sequelae, including permanent scarring and post-inflammatory dyspigmentation, as well as profound psychosocial morbidity. During adolescence, acne occurs at a time of critical psychological development, when self-image, peer relationships and social identity are being formed. The visibility of facial acne can therefore disproportionately affect self-esteem, confidence and mental wellbeing. Despite this, acne is frequently under-treated in primary care, either due to misconceptions regarding its inevitability or concerns surrounding treatment safety in younger populations. General practice nurses are often the first point of contact for adolescents presenting with acne and play a pivotal role in early recognition, education, treatment initiation and ongoing support. A clear understanding of acne pathophysiology, modifying factors and evidence-based treatment pathways is essential to ensure timely intervention and prevention of long-term sequelae.

KEY WORDS:

- Acne
- Pathophysiology
- Modifying factors
- Evidence-based treatment
- Psychosocial impact

Judith Harford

Advanced nurse practitioner,
Dorset

PATHOGENESIS OF ACNE VULGARIS

The pathogenesis of acne vulgaris is multifactorial and results from the complex interaction of four interrelated biological processes:

- Increased sebum production
- Abnormal follicular keratinisation
- Proliferation of *Cutibacterium acnes*
- Activation of inflammatory pathways (Jeremy et al, 2003; Tanghetti, 2013; Dreno et al, 2018).

Importantly, these processes do not occur sequentially but develop concurrently, with inflammation now recognised as an early and central feature of acne rather than a late consequence of comedone formation (Jeremy et al, 2003; Kircik, 2016).

During puberty, rising androgen levels stimulate sebaceous gland hypertrophy and increased lipid synthesis (Zouboulis, 2004; Thiboutot et al, 2009). Sebocytes respond particularly to testosterone and dihydrotestosterone, leading to the production of excessive, lipid-rich sebum (Zouboulis et al, 2007; Thiboutot et al, 2009). This altered sebum composition not only increases follicular occlusion, but also provides an optimal growth medium for *C. acnes* (Pappas, 2009; Dreno et al, 2018). Importantly, acne may develop even in the presence of normal circulating androgen levels due to increased local androgen receptor sensitivity and enhanced

cutaneous androgen metabolism within the pilosebaceous unit (Chen et al, 2003; Zouboulis et al, 2007).

Simultaneously, abnormal follicular keratinisation occurs as keratinocyte proliferation within the follicular infundibulum increases and corneocyte desquamation becomes dysregulated, resulting in retention hyperkeratosis (Cunliffe et al, 2000; Gollnick, 2015). This process leads to the formation of microcomedones, which represent the earliest subclinical acne lesions and the precursor to both open and closed comedones (Plewig and Kligman, 2000; Webster, 2002). Microcomedones may be present



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even in clinically unaffected skin, reinforcing the concept that acne is active before visible lesions emerge and highlighting the importance of early intervention (Gollnick and Dreno, 2015).

Within the occluded follicle, the resulting anaerobic environment promotes proliferation of *C. acnes*, a commensal organism of the skin microbiota (Beylot et al, 2014). Certain *C. acnes* strains demonstrate increased inflammatory potential and are more commonly associated with acne lesions (Lomholt and Kilian, 2010; McLaughlin et al, 2019). *C. acnes* contributes to acne pathogenesis through the production of lipases, which hydrolyse triglycerides within sebum into free fatty acids, leading to irritation of the follicular epithelium and surrounding dermis (Beylot et al, 2014; Dreno et al, 2018).

Crucially, *C. acnes* activates innate immune pathways via interaction with toll-like receptors, particularly toll-like receptor 2 (TLR-2), expressed on keratinocytes and immune cells (Kim et al, 2002). This interaction triggers the release of pro-inflammatory cytokines, including interleukin-1 β , interleukin-8 and tumour necrosis factor- α , resulting in recruitment of neutrophils and macrophages and the development of inflammatory papules, pustules and nodules (Kistowska et al, 2014; Dreno et al, 2018). Evidence demonstrates that inflammatory mediators are detectable even within non-inflamed comedones, reinforcing the concept of acne as an inflammatory disease from its earliest stages (Jeremy et al, 2003; Tanghe, 2013).

Recognition that inflammation and microcomedone formation occur early in acne pathogenesis directly informs treatment strategy. Therapies that normalise follicular keratinisation and suppress subclinical inflammation, particularly topical retinoids, are therefore indicated even in mild or comedonal acne. Similarly, the inflammatory role of *C. acnes* supports the use of anti-inflammatory agents such as benzoyl peroxide rather than reliance on antibiotics alone. This

mechanistic understanding underpins current guidance advocating early, combination topical therapy to prevent progression and scarring (National Institute for Health and Care Excellence [NICE], 2021).

“ ... understanding acne as a hormonally responsive condition rather than a hygiene-related disorder is essential. Misattribution of acne to poor cleansing practices can result in excessive product use, barrier disruption and worsening inflammation.

ROLE OF PUBERTY AND HORMONAL CHANGE

Puberty represents the most significant biological trigger for acne development. Rising androgen levels stimulate sebaceous gland enlargement and increase sebum synthesis, directly influencing acne severity (Thiboutot et al, 2009). Although androgen concentrations are typically higher in adolescent males, acne prevalence and persistence into adulthood is often greater in females, reflecting differences in androgen receptor sensitivity and local cutaneous hormone metabolism (Goulden et al, 1997; Kutlu et al, 2023).

In adolescent girls, cyclical hormonal fluctuations associated with the menstrual cycle frequently exacerbate acne. Premenstrual flares are common and usually occur despite normal physiological hormone concentrations. Although acne affecting the lower face and jawline is particularly characteristic of post-adolescent and adult female acne, similar cyclical exacerbations may also occur in adolescents. Consequently, endocrine investigations are often normal unless additional clinical features suggest an underlying disorder such as hyperandrogenism or polycystic ovary syndrome (Geller et al, 2014).

In the author's clinical opinion, understanding acne as a hormonally responsive condition rather than a hygiene-related disorder is essential. Misattribution of acne to poor cleansing practices can result in excessive product use, barrier disruption and worsening inflammation.

As androgen-driven sebaceous activity is central to acne development, treatments that indirectly reduce androgen influence are particularly effective in selected patients (Williams et al, 2012). While systemic anti-androgen therapy is not routinely indicated in adolescents, this mechanism explains the efficacy of combined oral contraceptives in post-menarchal females with hormonally responsive acne (Arowojolu et al, 2012). Importantly, it also explains why acne may persist despite normal endocrine investigations and why topical therapies targeting follicular pathology remain necessary regardless of systemic hormone levels.

INFLAMMATION AS A PRIMARY DRIVER OF ACNE

Research has reframed acne as a primarily inflammatory condition rather than a purely comedonal or infective disorder (Kircik, 2016). Histological studies demonstrate inflammatory infiltrates and cytokine activity in clinically non-inflamed lesions, indicating that inflammation precedes visible acne (Dreno et al, 2018).

This evolving understanding of acne pathogenesis has important implications for treatment selection. Current guidelines recommend topical retinoids as foundational therapy because they target two key pathogenic processes: abnormal follicular keratinisation and inflammation. By suppressing inflammatory pathways at an early stage, retinoids may limit lesion progression and reduce the risk of permanent acne scarring. Benzoyl peroxide complements this approach through its potent bactericidal activity against *C. acnes*, while avoiding the development of clinically significant bacterial resistance, making it an important component of antibiotic

stewardship in acne management. This treatment focus challenges outdated approaches that delay treatment until visible inflammation is established (Thielitz and Gollnick, 2008; Reynolds et al, 2024).

PSYCHOLOGICAL STRESS, EXAMS AND NEURO-ENDOCRINE PATHWAYS

Psychological stress is a recognised exacerbating factor in acne, particularly during adolescence. Stress activates the hypothalamic-pituitary-adrenal (HPA) axis, increasing secretion of corticotropin-releasing hormone and cortisol, both of which stimulate sebaceous gland activity (Böhm et al, 2009).

In the author's experience, teenagers frequently report acne flares during examination periods, school transitions and times of emotional stress. Stress also delays wound healing and prolongs inflammatory responses, contributing to persistent lesions (Chiu et al, 2003). Stress-mediated exacerbation of acne highlights the importance of addressing psychosocial factors alongside pharmacological treatment. Failure to recognise stress as a disease modifier may result in perceived treatment failure despite appropriate prescribing. General practice nurses (GPNs) should therefore incorporate stress assessment, expectation management and reassurance into acne consultations, particularly during examination periods.

SKINCARE PRACTICES, MAKEUP USE AND BARRIER DYSFUNCTION

Adolescents often experiment with skincare and cosmetic products without understanding their effects on acne-prone skin. Over-cleansing, harsh exfoliation and alcohol-based products disrupt the stratum corneum, increasing transepidermal water loss and triggering compensatory sebaceous activity (Rawlings and Harding, 2004).

Cosmetic use should not routinely be discouraged, provided patients choose non-comedogenic formulations. However, highly

occlusive products may contribute to follicular occlusion in susceptible individuals. Education regarding gentle cleansing, complete makeup removal and regular use of non-comedogenic moisturisers is an important component of acne management. Acne itself is associated with impaired epidermal barrier function, while topical retinoids and benzoyl peroxide may further disrupt the barrier, leading to irritation and reduced adherence. Evidence suggests that adjunctive use of gentle cleansers and barrier-supportive moisturisers improves tolerability of topical treatments, enhances adherence and supports better long-term outcomes (Del Rosso, 2013; NICE, 2021).

DIETARY INFLUENCES AND METABOLIC PATHWAYS

While diet is not a primary cause of acne, evidence suggests it may modulate disease severity (Pappas, 2009). High glycaemic load diets increase insulin and insulin-like growth factor-1 levels, stimulating androgen synthesis and sebocyte proliferation (Smith et al, 2007).

Observational studies have identified associations between dairy consumption and acne prevalence in adolescents, with skimmed milk demonstrating a stronger and more consistent association than whole milk (Adebamowo et al, 2005; Juhl et al, 2018). Proposed mechanisms include increased insulin and insulin-like growth factor-1 (IGF-1) signalling, together with the insulinotropic effects of whey proteins in milk. These pathways may enhance sebaceous lipogenesis, follicular keratinisation and inflammatory signalling, thereby contributing to acne development (Pappas, 2009; Melnik, 2015).

Whey protein supplementation has similarly been implicated in acne flares among adolescents and young adults, particularly those engaged in athletic training (Pontes et al, 2013; Meixiong et al, 2022). Importantly, these findings represent associative rather than causal relationships. Dietary advice should therefore emphasise balance and overall

nutritional adequacy rather than restriction, avoiding contributory shame or the promotion of disordered eating behaviours.

Dietary modification should also not replace pharmacological therapy, rather, understanding metabolic influences on acne provides a framework for supportive lifestyle advice. GPNs should avoid attributing acne causation to diet alone, instead positioning dietary guidance as an adjunct that may enhance overall treatment response without promoting restrictive behaviours.

PRINCIPLES OF ACNE TREATMENT

Primary goals of acne treatment are to reduce lesion formation, suppress inflammation, prevent scarring and improve quality of life. Treatment should be individualised based on acne severity, lesion type, distribution, psychosocial impact and patient preference (NICE, 2021; Reynolds et al, 2024).

Early intervention is critical, as prolonged inflammation increases the risk of permanent scarring. Patients and families should be counselled that acne is a chronic condition requiring sustained management rather than short-term treatment. In the author's experience, patients can often be looking for quick results and can be frustrated that a trial of treatment often needs at least three months. It is imperative to address this in consultations to manage treatment expectations.

TREATMENT FOR ACNE

Topical therapies: foundation of treatment

Topical therapies form the foundation of acne management because they directly target the earliest pathogenic events. Topical retinoids normalise follicular keratinisation, prevent microcomedone formation and exert anti-inflammatory effects, making them essential for both active treatment and long-term maintenance. Their mechanism directly addresses the abnormal

keratinocyte turnover described in acne (Jeremy et al, 2003; Thielitz and Gollnick, 2008; Kircik, 2016; NICE, 2021).

Benzoyl peroxide provides rapid bactericidal activity against *C. acnes* while also suppressing inflammatory mediators. Crucially, it does not induce bacterial resistance, making it suitable for long-term use and for combination with antibiotics. Fixed-dose combination products improve adherence and treatment efficacy by simultaneously targeting keratinisation, microbial activity and inflammation (Zaenglein et al, 2016).

Oral antibiotics and antimicrobial stewardship

Oral antibiotics are indicated for moderate-to-severe inflammatory acne when topical therapy alone is insufficient. Current guidelines recommend their use only in combination with topical retinoids and/or benzoyl peroxide and for the shortest effective duration, usually no longer than 12 weeks. Although tetracyclines have antimicrobial activity against *C. acnes*, their therapeutic benefit also reflects important anti-inflammatory effects. As oral antibiotics do not address the underlying abnormalities of follicular keratinisation or comedogenesis, maintenance treatment with topical retinoids is required following antibiotic discontinuation. Restricting antibiotic exposure is also an important component of antimicrobial stewardship, helping to reduce the development of antimicrobial resistance (Walsh et al, 2016; NICE, 2021; Reynolds et al, 2024).

For this reason, oral antibiotics should always be prescribed alongside topical retinoids or benzoyl peroxide and limited to the shortest effective duration, typically three months, in accordance with NICE guidance (NICE, 2021). Failure to transition to maintenance topical therapy is a common cause of relapse.

Hormonal treatment options in adolescent females

As discussed in the earlier section on the influence of hormones, in post-menarchal adolescent females,

combined oral contraceptives may improve acne by suppressing ovarian androgen production and increasing sex hormone-binding globulin, thereby reducing free circulating androgens (Arowojolu et al, 2012; NICE, 2021). This mechanism directly addresses androgen-driven sebaceous activity. Such treatment should be considered within a broader contraceptive and safeguarding discussion and is not recommended as monotherapy for acne.

“Acne is strongly associated with anxiety, depression and social withdrawal in adolescents (Halvorsen et al, 2011). Effective treatment significantly improves quality of life, reinforcing the importance of early, holistic intervention.”

Isotretinoin: indications, risks and safeguarding

Isotretinoin is uniquely effective because it targets all major pathogenic mechanisms of acne. It reduces sebaceous gland size and sebum production, normalises follicular keratinisation, suppresses *C. acnes* proliferation and exerts potent anti-inflammatory effects (Layton, 2010). This comprehensive mechanism explains its efficacy in severe, scarring or treatment-resistant acne.

However, its risk profile necessitates stringent safeguarding and must be commenced by a dermatologist in secondary care. Teratogenicity is absolute, and pregnancy prevention programmes are mandatory regardless of age (Medicines and Healthcare products Regulatory Agency [MHRA], 2023). Clinicians should not assume sexual inactivity in adolescents. Given reported associations with mood changes, baseline and ongoing mental health assessment is essential.

PSYCHOSOCIAL IMPACT AND LONG-TERM OUTCOMES

Acne is strongly associated with anxiety, depression and social withdrawal in adolescents (Halvorsen et al, 2011). Effective treatment significantly improves quality of life, reinforcing the importance of early, holistic intervention. Effective acne treatment has been shown to significantly improve self-esteem, anxiety and depressive symptoms, reinforcing the importance of early and sustained intervention (Halvorsen et al, 2011). Conversely, delayed or inadequate treatment may perpetuate psychological distress even after physical improvement. This highlights the need for holistic care that integrates dermatological management with psychosocial assessment throughout the treatment pathway.

CONCLUSION

Acne in teenagers is a complex inflammatory condition influenced by hormonal, immunological, psychological and environmental factors. Early, evidence-based intervention delivered within primary care can prevent long-term physical and psychological sequelae. GPNs play a central role in education, treatment adherence, safeguarding and advocacy for adolescent patients. **GPN**

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Meningitis, meningococcal meningitis and MenB: an explainer for general practice nurses

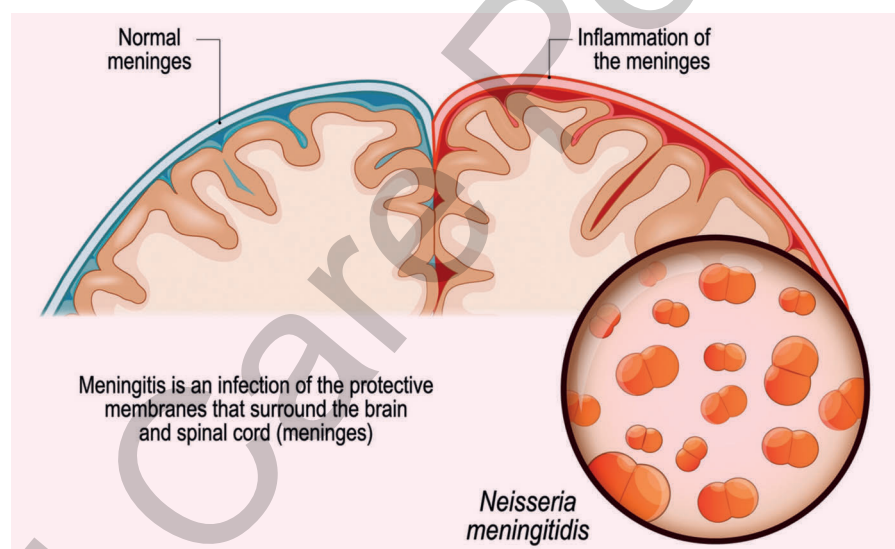
Meningitis is uncommon, but it remains one of the infections that general practice nurses (GPNs) need to keep front of mind because deterioration can be rapid and the consequences devastating. This article explains what meningitis is, why meningococcal meningitis and meningococcal B disease matter in UK practice, how symptoms may present across age groups, and what GPNs can do to support early recognition, urgent escalation, vaccination uptake and recovery.

KEY WORDS:

- Meningitis
- Symptoms
- General practice nurses
- Vaccination

Elaine Devine

Elaine Devine, director of communications and engagement, Meningitis Research Foundation



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WHY MENINGITIS MATTERS IN GENERAL PRACTICE NURSING

General practice nurses (GPNs) are often the first point of contact for people – seeing people in clinics, or during routine immunisation conversations. That contact can be crucial for meningitis because it can begin with symptoms that look like a common viral illness, but bacterial meningitis and meningococcal disease can progress within hours. For nurses working in primary care, the priority is to recognise serious illness, safety-net effectively and escalate urgently when meningitis or sepsis is possible.

The *Journal of General Practice Nursing* provides education and practical learning resources for primary care nurses, and this topic sits firmly within that remit: meningitis awareness supports safer triage, better conversations with families, improved vaccine

“... GPNs should think beyond the classic combination of fever, headache and neck stiffness. Some patients, especially babies, young children, older adults and people with altered immunity, may present atypically.

confidence and timely post-discharge support.

WHAT IS MENINGITIS?

Meningitis is inflammation of the meninges, the membranes that surround the brain and spinal cord. It is most often caused by infection with bacteria, viruses or fungi. Viral meningitis is generally less severe and may resolve without specific treatment, although it can still cause

significant illness. Fungal meningitis is rarer, can be deadly but usually develops more gradually. Bacterial meningitis is the most dangerous form because it can be rapidly life-threatening and requires urgent treatment with antibiotics (Meningitis Research Foundation, n.d. a).

The organisms that cause meningitis can also cause sepsis. Sepsis is the body's life-threatening response to infection, where the immune reaction causes damage to tissues and organs. In practice, meningitis and sepsis can overlap, particularly in meningococcal disease (Meningitis Research Foundation, n.d. b). This is why GPNs should think beyond the classic combination of fever, headache and neck stiffness. Some patients, especially babies, young children, older adults and people with altered immunity, may present atypically (Meningitis Research Foundation, n.d. b).

WHAT IS MENINGOCOCCAL MENINGITIS?

Meningococcal meningitis is meningitis caused by *Neisseria meningitidis*, also known as meningococcus. When this bacteria invades the body it can cause meningitis, sepsis or both. Severe infection caused by meningococcal bacteria is known as invasive meningococcal disease. It can affect anyone, but risk is higher in babies and young children, teenagers and young adults, and people with specific medical risk factors such as an absent or poorly functioning spleen or immunosuppression (Meningitis Research Foundation, n.d. b).

Meningococcal bacteria commonly live harmlessly in the back of the nose and throat. Spread usually requires close or prolonged contact, such as living in the same household, intimate kissing or sharing items that carry saliva (including drinks, cigarettes or vapes) (Meningitis Research Foundation, n.d. c). Most people who carry the bacteria do not become ill, but a small proportion develop invasive disease. This is not fully understood, but may relate to immunity, concurrent infection, environmental factors and bacterial characteristics.

MENB: WHY IT IS CLINICALLY IMPORTANT

Meningococcal bacteria are grouped into serogroups. The main disease-causing groups are A, B, C, W, X and Y. MenB refers to meningococcal group B. In the UK, MenB is currently the leading cause of invasive meningococcal disease. The UK Health Security Agency (UKHSA, 2026) reported 313 confirmed MenB cases in England during 2024/25. In the same period, 100% of invasive meningococcal disease cases in 15–19-year-olds (65 of 65) and 97% of cases in 20–24-year-olds (29 of 30) were MenB. MenB has been central to recent public concern following outbreaks and clusters affecting young people, including in Kent in early 2026.

For GPNs, the significance is twofold. First, MenB disease can be rapidly progressive and may lead to amputations, hearing loss, brain injury or death (Meningitis Research Foundation, n.d. d). Second, prevention is changing. The UK routine programme already offers MenB vaccination in infancy but a time-limited programme is also being introduced for some young people in 2026. Those who are eligible will need two doses for best protection.

RECOGNISING SYMPTOMS: THINK MENINGITIS AND SEPSIS

Early symptoms may be non-specific: fever, vomiting, headache, muscle or limb pain, lethargy, irritability or feeling generally unwell (Meningitis Research Foundation, n.d. b). At this stage, a key difference from a common virus is that the person affected or their parents, caregivers or relatives often have a strong sense that something 'isn't right'.

As illness progresses, symptoms may include severe headache, neck stiffness, dislike of bright lights, confusion, delirium, seizures, drowsiness, difficulty waking, pale or mottled skin, cold hands and feet, fast breathing, breathlessness and a rash. A non-blanching rash is a red flag but absence of a rash must never be used to rule out meningitis or meningococcal disease. People should never wait for a rash to appear, as it is a late symptom and can lead to the very worst outcomes (Meningitis Research Foundation, n.d. b).

Babies and very young children may present differently. Warning signs can include poor feeding, vomiting, irritability, a high-pitched cry, abnormal drowsiness, staring expression, a stiff body with jerky movements, floppiness, cold hands and feet, breathing difficulty, or a tense or bulging fontanelle (Meningitis Research Foundation, n.d. b). A high temperature can be a symptom for babies and very young children but, for babies under three months old, it can be normal or low. A pin prick rash, marks or bruises anywhere on the body, blotchy skin which gets paler or turns blue, or

Practice point

- Meningitis is inflammation of the membranes around the brain and spinal cord; bacterial meningitis is a medical emergency (Meningitis Foundation, n.d. a)
- Meningococcal bacteria can cause meningitis, sepsis, or both; severe infection is called invasive meningococcal disease (Meningitis Foundation, n.d. b)
- MenB is the leading cause of invasive meningococcal disease in the UK and is particularly relevant to infants, teenagers and young adults (Meningitis Research Foundation, 2026)
- Symptoms can be non-specific, appear in any order and may progress rapidly; do not wait for a rash (Meningitis Foundation, n.d. b)
- GPNs should escalate suspected bacterial meningitis or meningococcal disease urgently, safety-net clearly and support vaccine uptake
- After discharge, general practice nursing input can help identify ongoing physical, cognitive, sensory and psychological needs (Meningitis Research Foundation, n.d. d).

unusual grunting sounds are other symptoms (Meningitis Research Foundation, n.d. b). For any of these symptoms, they can appear in any order and not every patient will develop every one of them.

The National Institute for Health and Care Excellence (NICE) guidance on bacterial meningitis and meningococcal disease emphasises early recognition, emergency transfer and rapid antibiotic treatment in hospital (NICE, 2024). For primary care settings, this means clear escalation: if bacterial meningitis or meningococcal disease is suspected, the patient needs emergency medical assessment. GPNs should follow local protocols, call emergency services when needed, and document observations, symptom progression, parental, caregiver or patient concerns and safety-netting advice.

PRACTICAL ROLE OF GENERAL PRACTICE NURSES

In the author's opinion, GPNs can make a difference at several points in the pathway. In assessment, they can identify rapid deterioration, listen to family concerns and avoid false reassurance when symptoms are evolving. In prevention, they can promote routine immunisation, check whether families understand which vaccines protect against which strains, and signpost eligible people to the latest NHS or health service information. In recovery, they can support people after discharge, helping them navigate fatigue, hearing problems, cognitive changes, limb or joint problems, anxiety, depression and other possible after-effects.

Good safety-netting is essential. Patients and carers should be told to seek urgent help if symptoms worsen, new symptoms appear, the person becomes difficult to wake, develops breathing problems, has cold extremities, confusion, a non-blanching rash, seizures, or if the nurse, patient or family member is worried. Advice should be specific – check regularly, trust instincts and do not wait for a rash.

VACCINATION AND THE MENB PROTECTION GAP

Vaccination is the best available protection against vaccine-preventable causes of meningitis. In the UK, the MenB vaccine is offered to babies at eight and 12 weeks, with a booster at one year. The MenACWY vaccine is offered to teenagers and protects against groups A, C, W and Y, but not group B. This distinction is important: a young person who has received MenACWY is not protected against MenB unless they have also received a MenB vaccine.

Bexsero® is the MenB vaccine included in the NHS vaccine schedule for infants and for individuals in high-risk groups. Research shows that Bexsero® will give a person around five years of additional protection after the second dose, although this varies

Box 1

Supporting communities through the MenB outbreak: Meningitis Research Foundation's role

Meningitis Research Foundation responded rapidly and comprehensively to the UK's MenB outbreak, acting as a trusted source of information, reassurance and support for affected communities, education settings, health partners and the wider public.

During the outbreak period, we contacted universities, schools and sixth form colleges across Kent, Dorset and Berkshire; answered simple and complex questions about meningitis, symptoms, risk and vaccination; countered misinformation; updated our public-facing information; and provided emotional support through phone, email, live chat and social media channels.

UKHSA public information signposted people to Meningitis Research Foundation for further information and support, and we provided expert, evidence-based commentary to more than 600 media outlets to help ensure that reporting was accurate, factual and measured.

Demand for our Support Services more than tripled, rising by 210% compared with the previous quarter, while website traffic increased threefold as people searched for clear guidance on symptoms, risks and vaccines.

For community nurses, this reinforces the importance of having trusted, up-to-date information available during outbreaks, particularly when families are anxious and misinformation is circulating (especially on social media).

This response built on more than a decade of evidence-led campaigning for broader MenB protection, including our Counting the cost research and the voices of families affected by MenB.

While the one-off targeted vaccination programme being introduced across the UK is welcome and long overdue, Meningitis Research Foundation does not believe it will fully close the UK's MenB protection gap for teenagers and young adults. That is why we will continue to support implementation, help eligible young people access clear information and both vaccine doses, reach communities where health inequalities are most acute, and campaign until every teenager and young adult at risk of meningitis has the protection, information and support that they need.

“The MenACWY vaccine is offered to teenagers and protects against groups A, C, W and Y, but not group B. This distinction is important: a young person who has received MenACWY is not protected against MenB unless they have also received a MenB vaccine.

between individuals (Meningitis Research Foundation, n.d. c; Wang et al, 2025).

A one-off MenB vaccination programme, using Bexsero®, is being introduced in the UK in 2026, with rollout beginning in July. Across the UK, this one-off MenB vaccine programme is aimed at older teenagers in the school-leaver age group and under-25s starting university or residential further education for the first time in autumn 2026, including eligible international students (key at-risk groups for MenB in the UK) (GOV. UK, 2026; UKHSA, 2026).

Delivery arrangements and exact eligibility criteria vary across the four nations, so GPNs should encourage

take up of this time-limited offer, signpost patients and families to current NHS or local health service guidance, and remind eligible young people that two doses are needed for best protection.

AFTER-EFFECTS AND FOLLOW-UP

Most people recover from meningitis, but bacterial meningitis and meningococcal disease can leave lasting effects. These may include hearing loss, tinnitus, balance problems, headaches, fatigue, seizures, epilepsy, memory or concentration difficulties, learning needs, visual problems, mental health difficulties, skin scarring, joint problems, kidney damage or limb loss after sepsis (Meningitis Research Foundation, n.d. d; Zainel et al, 2021).

Follow-up is particularly important for children because developmental or neurocognitive effects may become clearer over time (Mohanty et al, 2024). Prompt follow-up is also essential for time-sensitive interventions, such as hearing assessments that determine



Photograph: Konnoth/Shutterstock

whether cochlear implants are needed.

GPNs are well placed to identify unmet needs after hospital discharge. This can include checking whether hearing assessments and follow-up appointments have taken place, supporting wound or skin care where sepsis has caused tissue damage, monitoring fatigue and emotional wellbeing, and signposting to specialist support. Families may need reassurance that recovery can be uneven and that new concerns should be raised, even weeks or months later. **GPN**

What are the after-effects of meningitis?

Available online: www.meningitis.org/about-meningitis/meningitis-after-effects/

Meningitis Research Foundation (2026)

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Key points

- Meningitis is uncommon, but it remains one of the infections that GPNs need to keep front of mind because deterioration can be rapid.
- Meningitis is inflammation of the meninges, the membranes that surround the brain and spinal cord.
- In practice, meningitis and sepsis can overlap, particularly in meningococcal disease.
- Early symptoms may be non-specific: fever, vomiting, headache, muscle or limb pain, lethargy, irritability or feeling generally unwell.
- Vaccination is the best available protection against vaccine-preventable causes of meningitis.

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Infection prevention and control in minor surgery: role of the nurse

Minor surgical procedures are carried out routinely in many practices in the UK and while there is a low risk of infection as a result of these procedures, this risk is not completely absent. General practice nurses (GPNs) are often those who take responsibility for infection prevention and control (IPC), including decontamination, within the practice and this may also be the case in relation to minor surgery. Nurses need to ensure that they are competent in all related procedures to minimise the risk of infection as far as possible. This article considers the different elements that need to be in place at different stages of the process, including prior, during and after the procedure, including any reprocessing of instruments used.

KEY WORDS:

- Minor surgery
- Infection prevention and control
- Decontamination
- Sterilisation
- Standard precautions

Dana Wood

Freelance consultant



Photograph: Dmitry Demidovich/Shutterstock

The role of the general practice nurse (GPN) is wide and varied and, in addition, differs between practices in terms of responsibilities and which staff members certain procedures are delegated to (Clifford et al, 2024). For example, nurse practitioner level staff take on specific responsibilities in some practices but not others. In addition, healthcare assistants (HCAs), nursing associates (NAs) and support workers are taking on increasingly complex tasks within general practice in order to provide a wider range of services to the local population (Khan, 2022).

The Care Quality Commission (CQC, 2025) highlights that someone within a practice should take the lead for infection prevention and control (IPC) in order to ensure that there is compliance with the Health and Social Care Act 2008 code of practice on the prevention and control of infections and related guidance (Department of Health

and Social Care [DHSC], 2015). It is often GPNs who take on this responsibility (CQC, 2025). One of the services that many practices provide is that of minor surgery, with a range of procedures being offered locally, negating the need for hospital visits and day case surgery. IPC in relation to such procedures is of vital importance as, while these procedures are minor, there is still a risk of surgical site infection (SSI) in some cases, emphasising the need for appropriate precautions to be in place (CQC, 2025).

TYPES OF MINOR SURGICAL PROCEDURES CARRIED OUT IN GENERAL PRACTICE

In the UK, a range of minor surgical procedures are carried out by authorised GPs as part of their contract (Table 1). Some practices work together to provide a wider range of procedures and one practice may refer patients to another for

some elements, where a GP is highly specialised in specific procedures. For procedures which are part of a directed enhanced service, eligibility criteria include sterilisation and IPC compliance. While the overall risk of complications in minor surgery is low (Botting et al, 2016), it is not zero.

IPC PRECAUTIONS BEFORE SURGERY

The nursing role in minor surgery is often one of assistance. It may also be the case that preparation of the patient and the room to be used is part of that role. Ensuring compliance with IPC standards is vital to minimise the risk of infection and cross-infection as far as possible. Rarani and Kramer (2023) highlight the need for IPC systems to be adapted to the individual needs of a service and its patients; this is particularly pertinent to general practice where the procedures carried out are considered minor and

there is not a traditional operating theatre on-site. Preparation of the patient and room are therefore not the same as in a traditional operating theatre setting.

The room in which minor surgery is carried out needs to be compatible with IPC requirements, particularly in terms of ease of cleaning and provision of hand hygiene facilities. Avoidance of dust traps to facilitate easy cleaning and removing clutter are beneficial. Also, consider the type of flooring in the room for cleaning and dealing with fluid spills, and ensure provision of appropriate waste containers with appropriate bag colour coding. Premises should be cleaned and managed to facilitate IPC procedures and should have their own detailed policies and procedures for cleaning.

NHS England (2025) further emphasises the importance of effective cleaning for IPC. Ideally, room preparation should include completion of the daily cleanliness log or five-star display update. The latter is not mandatory, as general practice does not have to comply with the national NHS cleaning standards. However, choosing to follow these standards can provide useful evidence of compliance with CQC requirements. Touch points and surfaces should be wiped using the locally approved disinfectant (for example, a 1000ppm chlorine releasing agent). Couch roll should be replaced and there should be an adequate supply of personal protective equipment (PPE), which meets the requirements of the procedures being undertaken.

Spillage kits should be available which are appropriate for the procedures, sharps bins should be available at point of use of any sharps (needles, scalpels, etc) and all items should be checked to ensure that they are within their expiry date (including disinfectants and consumables, such as needles, dressings). If there are any specific readings that need to be taken which have been identified by your practice IPC risk assessment, these should be recorded and appropriate action taken if any are outside the required limit. This might

Table 1: Examples of minor surgical procedures carried out in UK general practice

Type of procedure	Examples
Cryotherapy	Warts, verucae, some keratoses
Electrocautery	Skin tags
Curettage	Skin tags
Injections	Steroids, joint injections, varicose veins, haemorrhoids, carpal tunnel injections
Aspiration	Joint aspiration
Excisions	Removal of skin lesions, cyst excision
Incisions	Cyst drainage
Others when considered competent	Skin biopsy, endometrial sampling, toenail removal, contraceptive implant removal

include drug fridge temperatures. Part of the GPN role may also include setting out sterile packs and single-use consumables, which need to have intact dry packaging and be within expiry date to ensure sterility.

In terms of the patient, it is usual practice to assess risks in relation to infection and many practices have risk assessment forms or questions within their records which reflect this. This may include assessing whether the patient is at higher risk of acquiring an infection or if they themselves already have an infection. In some practices, there are some infections which are contraindications for specific procedures so these would need to be identified. In general, this might include an active infection in the site to be addressed during the procedure. This is the type of issue that could be identified as part of the minor surgery checklist which is recommended for each patient (Centre for Perioperative Care, 2023).

PRECAUTIONS DURING PROCEDURES

During minor surgical procedures, there is a risk of transmission of infection, both from patient to staff and vice versa. In addition, if proper procedures are not followed, microbes may be transmitted from one patient to another. To minimise this risk, all staff performing or assisting with invasive procedures should apply standard IPC precautions (National Institute for Health and Care Excellence [NICE],

2019). These include appropriate hand hygiene before and after the procedure. While a full surgical scrub is usually not required, a thorough wash of hands and wrists with soap and water followed by thorough drying are required. The use of nail brushes is not recommended (NHS England, 2022), as they become a reservoir for microbes, can cause skin damage and can push microbes further into the skin, particularly around the nails. They can also lead to higher bacterial counts on the hands (Parlak et al, 2021). As is usual practice, fingernails should be short and false nails and nail polish should not be worn due to the increased risk of contamination with a range of microorganisms; and hands and wrists should be free from jewellery to facilitate appropriate hand hygiene and avoid collection and harbouring of microbes (Hewlett et al, 2018).

The PPE worn should be appropriate to the procedure being undertaken and may include sterile gloves, scrubs, plastic apron, face masks, goggles and/or a face visor. PPE should be selected following a risk assessment that considers both the risk of exposure to blood and body fluid splashes for staff and the risk of introducing microorganisms into the patient's body during the procedure, particularly when determining the need for sterile gloves. While Rietz et al (2015) argue that non-sterile gloves were not inferior to sterile gloves in relation to SSI following minor skin procedures, this was based on one trial in

Box 1**Example of an audit of practice**

As part of a routine annual audit programme, the IPC nurse was carrying out planned audits of practices. A visit was made to a practice that carried out several minor surgical procedures as the GP was considered an expert in these procedures and other practices referred their patients to him. At the audit, several issues were highlighted – the floor in the room where minor surgery was carried out was carpeted, there was a gas fire on the wall and there was no handbasin or sink in the room. On questioning, the IPC nurse was told that the GP washed his hands in the sink in the adjoining kitchen. This kitchen sink was also used for washing up cups and other crockery and for cleaning instruments and vaginal speculums. These issues were escalated immediately and the GP was suspended from carrying out procedures until the facilities met required standards.

primary care. When wearing sterile gloves, the outer surface needs to be sterile and therefore there should be no skin contact with the outside of the glove. This means following the correct technique, as per the Royal Marsden Manual, for glove donning (Lister et al, 2020). When removing PPE following the minor procedure, the different items should be removed in the correct order to avoid contamination of the skin, clothing and environment (NHS England, 2022).

Skin site preparation will be determined by the procedure and related infection risks. Where preparation is required, it should be carried out as close to the actual procedure as possible. The aim of surgical skin preparation is to remove any dirt, organic matter and transient microorganisms on the surface of the skin while also rapidly killing the resident skin flora (normal flora) at the surgical site (Jolivet and Lucet, 2019). This significantly reduces the number of microorganisms on the skin and therefore the risk of wound contamination during surgery, reducing the risk of a SSI. The skin has a wide range of bacteria, fungi and viruses on its surface and, while they are generally harmless, when the skin is broken during any procedure, there is a risk of them entering the wound and causing infection in both the wound and bloodstream (Jolivet and Lucet, 2019).

Proper preparation of the skin is therefore one of the most effective ways to prevent this occurring. NICE (2019) highlights that if a patient

arrives for minor surgery with dirt, oil or grime at the procedure site, they should be asked to wash the area with soap and water before any skin preparation is carried out by staff. Should the procedure area need hair removal, this should ideally be carried out using clippers with a disposable head as opposed to a razor, because the latter can lead to small skin breaks that can increase the growth of bacteria on the skin. While a Cochrane review identified that the use of razors likely increased the risk of SSI, it was reported that there was no significant difference in SSI rates between the use of clippers and not removing hair at all (Tanner and Mellen, 2021).

It is recommended that the skin be disinfected with either an alcohol-based chlorhexidine gluconate (CHG) solution or a povidone-iodine (PI) solution (Association for Perioperative Practice [AfPP], n.d.). Alcohol-based antiseptic solutions are commonly recommended because alcohol has a high level of rapid antimicrobial activity, with Allegranzi et al (2016) reporting a 40% higher efficacy in SSI reduction in alcohol-based antiseptics when compared with those without alcohol. Additionally, CHG has a longer lasting activity than PI, but allergy considerations may play a part in antiseptic choice. It needs to be noted that alcohol-based solutions need to fully dry which can take at least two minutes.

With some procedures, there may be a requirement to obtain specimens to be analysed in a

laboratory. Any biological samples should be sent to the laboratory in non-leak containers and must comply with current legislation and local procedures. This would all need to be in line with the Carriage of Dangerous Goods Regulations.

POST-PROCEDURE IPC PRECAUTIONS

Completion of a minor surgical procedure does not mark the end of IPC requirements. The wound should undergo a final inspection, and an appropriate dressing applied where necessary to protect the wound from the entry of microorganisms until it has healed. Patients should be provided with information about signs and symptoms of SSI, such as increased pain, redness or wound discharge (CQC, 2025), and what to do if they notice any. Sharps used (such as needles and scalpels) should be disposed of safely and correctly in an approved container, which has been correctly assembled and labelled. Clinical waste should be disposed in the correct waste stream (orange, yellow, tiger bag) (NHS England, 2023). Environmental cleaning should also be carried out before the next patient (CQC, 2025).

DECONTAMINATION OF SURGICAL INSTRUMENTS

The Department of Health (DH) defines decontamination as 'the combination of processes (including cleaning, disinfection and sterilisation) used to make a reusable item safe for further use on service users and for handling by staff' (Health and Safety Executive [HSE], n.d.).

The DHSC Code of Practice (DHSC, 2015) requires that a decontamination lead be appointed by the practice (this can be the same person as the IPC lead), with responsibility for devising a decontamination policy and monitoring all aspects of the decontamination cycle. This policy should comply with national guidelines and legislation.

In many areas, single-use instruments are used in minor surgical procedures. It is vital to

ensure that these are not reused and that they are disposed of appropriately in compliance with national guidance and waste management legislation, whether this be in an approved sharps container or in a clinical waste bag (Medicines and Healthcare products Regulatory Authority [MHRA], 2021).

Where reusable instruments are used, they must be reprocessed according to national policy. This may involve using a local central sterilisation service, such as one provided by a local hospital. In some settings, small bench-top sterilisers remain in use. It is essential that these are of the appropriate type (vacuum or non-vacuum) for the instruments being processed, and that required daily and weekly testing is carried out as per national guidance. Since 2013, the MHRA (2013) has recommended that, wherever possible, surgical instruments should be reprocessed by a sterile services department, as this provides a more rigorous and consistent approach. Where a bench-top steriliser is used, the following rules should be followed (MHRA, 2013):

1. Instruments should be thoroughly cleaned prior to placement in the steriliser – sterilisation is not effective on physically dirty items. Ultrasonic cleaning is an option for this. If cleaned manually, this should be carried out in a utility basin which is separate from the hand basin.
2. You need to be clear about whether you are using a traditional or a vacuum steriliser.
3. Wrapped and tubular items should only be reprocessed in a vacuum steriliser – a traditional steriliser is not effective on such items.
4. Daily, weekly and Competent Test Person (CTP) tests should be carried out correctly and the results recorded. The steriliser should not be used if the daily tests have not been carried out and recorded on that day – ideally, the daily tests should be carried out using an empty cycle.
5. The chamber and reservoir should be emptied, cleaned and dried at the end of each day and be left to dry overnight. Appropriate water (usually sterile) should be used at the beginning of each day to fill the reservoir. Water left in the chamber and reservoir can act as a growth medium for microorganisms.
6. Records should be kept of each cycle for traceability reasons should there need to be an audit trail or investigation at a later date.
7. Pressure checks should be carried out as per the requirements for the type of steriliser.
8. Single-use devices should not be reprocessed in a steriliser as they should be disposed of after one use, not reprocessed for reuse.
9. Full records of all internal and external tests and checks on the steriliser should be kept in a log book.
10. Instruments processed in a non-vacuum bench-top steriliser should not be removed at the end of the cycle, placed into bags and then regarded as sterile for storage. Such sterilisers are intended to reprocess instruments for immediate use. Where items need to be sterilised and stored for future use, a

Paul's story

Paul underwent a vasectomy at a local clinic and was part of a pilot of a new surveillance project where the clinic nurse provided him with information about the rationale for completing the form, how it should be completed and when to return it to the clinic. The form was never returned by Paul and the doctor said that, as far as he was concerned, that meant that Paul had not had any infection-related issues following the procedure. Three months later, the clinic received a written complaint from Paul's wife. Paul had had a severe infection following the procedure and had been admitted to hospital for intravenous antibiotics. His wife had several concerns about what had occurred during the procedure that she considered were poor practice and would have contributed to the infection. Following this, the local infection prevention and control team carried out an investigation with the quality lead around the doctor's practices while carrying out procedures.

A letter had been sent to the GP by the hospital following Paul's discharge, but this had been filed away and not linked to the vasectomy or actioned in terms of SSI or the pilot surveillance project. Following this failure of the pilot to identify this infection owing to the patient not returning the form, the system was reviewed and amended to include the nurse calling patients at the end of the 30-day post-procedure period to remind them to return the form and also to ask if there had been any issues.

vacuum-type steriliser should be used.

11. Items should not touch each other inside the steriliser, as this may prevent steam from reaching all the surfaces of the instruments, thereby compromising sterilisation.
12. Staff using the steriliser should be appropriately trained and considered competent to operate that type of steriliser.

SURVEILLANCE OF INFECTION

The World Health Organization (WHO, 2024) highlights the surveillance of infection as a vital component of IPC. Active SSI surveillance can also help inform preventative measures and assess their impact (Bataille et al, 2021). There are challenges in identifying an appropriate approach to surveillance for procedures undertaken in general practice. Therefore, each practice should decide whether to undertake surveillance and, if so, which method is most appropriate. This may include the GPN providing the patient with a surveillance questionnaire to take home, complete and return 30 days after the procedure.

A SSI is considered to be an infection which occurs within this surveillance period (Rezaei et al, 2025). This approach would require follow-up reminders, typically from the GPN, to remind and encourage patients to complete and return the surveillance questionnaire. However, patients who have experienced no problems are often less likely to return completed questionnaires, although this is not always the case (Rochen et al, 2024) (see *patient story*). Failure to return a surveillance questionnaire should not be interpreted as an absence of infection. Digital tools have shown promise in studies for identifying patients with SSIs (Dacol et al, 2024), so may offer a future option for surveillance in general practice.

CONCLUSION

While the risk of infection following minor surgical procedures carried out in general practice is low, it is still essential that correct IPC procedures are in place. Staff carrying out these procedures should be appropriately trained, keep accurate records, and comply with national guidance and legislation. Adherence to these measures can help to minimise the risk of infection, promote patient safety and provide evidence that IPC and decontamination processes have been carried out should an investigation be required. As GPNs are often responsible for these processes, they should be educated, trained and assessed as competent to carry them out to the highest standards. **GPN**

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Suicide: a personal tragedy and global health challenge

Suicide is a stark word that provokes a deluge of emotions in all of us, including general practice nurses (GPNs) and society at large, both on a personal/community and professional level. Suicide provokes a wide range of questions and has many ramifications that ripple outwards. It can cause consternation on the part of the primary care practitioner by questioning themselves and their actions and also on the part of the families and friends while coping with grief and all asking, among other things, should I have acted or spoken differently. Suicide and attempted suicide impacts all of us, our colleagues, our patients and ourselves.

KEY WORDS:

- Suicide
- Attempted suicide
- Emotional response
- Actions and strategies
- Role of general practice nurses

Teresa Burdett

Independent nurse consultant



Suicide is defined as 'death caused by self-directed injurious behaviour with intent to die as a result of the behaviour...' (National Institute of Mental Health, 2024). Suicide rates between the ages of 10 to 24 years have significantly increased by 22.7% between 2012 to 2016 and 2018 to 2022 (Office for Health Improvement and Disparities, 2024). Suicide rates are affected by factors such as age, gender and geographical region. For example 'all female age groups in the Yorkshire and the Humber region showed increasing rates – females aged 25 to 44 years showed a significant increase from 5.0 (4.3, 5.8) to 7.9 (7.0, 8.9) per 100,000 population, between 2012 to 2016 and 2018 to 2022', and male rates of suicide, apart from in the London region, also continue to increase (Office for Health Improvement and Disparities, 2024). Other factors also impact suicide rates, such as poverty and low socio-economic status (Naher et al, 2019; Stack, 2021).

This public health concern is not just restricted to the United Kingdom. In 2021, suicide was the 11th leading cause of death overall in the United

States, claiming the lives of over 48,100 people, with the suicide rate being four times higher among males than females (National Institute of Mental Health, 2024).

Attempted suicide on the other hand is seen as:

An umbrella term that covers a number of different behaviours. Common to these behaviours is that people inflict acute harm upon themselves, poison or injure themselves or try to do so, with non-fatal outcome. Also common to these behaviours is that they occur in conditions of emotional turmoil. (Kerkhof, 2000: 50)

Attempted suicide and suicide have many causes, and the modes of actions and implementation may vary widely between individuals. However, in essence, there is a human being who is under extreme stress and is responding to emotional disorder.

POTENTIAL FACTORS

Factors that may support suicide and suicidal attempts include:

- Mental health conditions, including depression
 - Limited support or access to support
 - Stigma
 - Serious or a life-limiting illness
 - Chronic pain
 - Social isolation, including being situated in a rural community
 - Use of substances, including alcohol or drugs
 - Traumatic experiences in childhood or adulthood, including abuse and sexual assault
 - Financial issues
 - Relationship issues
 - Previous suicide attempts
- (Centers for Disease Control and Prevention [CDC], 2024).

ACTION PLAN

Considering that suicide and attempted suicide is an issue of significant concern, in the author's opinion, an effective inclusive, person-centred integrated action plan needs to be in place with a robust strategy for implementation. This could draw together strands of best practice and what has proven effective nationally and internationally, while still being flexible to local or specific needs.

LOCAL STRATEGIES

There are a number of local suicide prevention strategies in place. Being familiar with your own local strategy and who to contact is key for general practice nurses (GPNs) when caring for individuals experiencing distress and/or their families and friends.

One example of such a plan is in Dorset in the south coast of England, where they have formed a multi-agency group which consists of statutory organisations including National Health Services, police and fire services, and the local council. Their aim is to oversee a joined-up suicide prevention programme with the laudable aim of preventing all deaths by suicide, if at all possible. The Dorset suicide prevention vision aims to achieve 'zero-suicides' (Dorset Integrated Care Board [ICB], 2024) with the belief that, 'no one of any age living in Dorset will reach the point where they feel or believe that they have no other choice but to attempt suicide or to end their life by suicide' (Our Dorset, 2024).

National legislation and policy drivers, such as the NHS *Five Year Forward Plan* (NHS England, 2014) and the *NHS Long Term Plan* (NHS England, 2019) have helped to form part of the Dorset structure and background thinking. However, the Dorset aim is for no suicide deaths, whereas the *NHS Long Term Plan* has reduction targets of 10% (NHS England, 2019). In Dorset, the aim for all-age suicide reduction includes the use of six workstreams, including the utilisation of real time surveillance of data in relation to suicide and attempted suicide to help shape planning and formation of response, supporting the development of a group of individuals who have lived experience of the implications of suicide and attempted suicide and who are able to advise and comment on the formation and development of the prevention strategy, and strengthening community development and voluntary partnership working. Local media campaigns are also being developed across the Dorset region, and ongoing suicide training and bereavement support is to be provided to those who have experienced loss through suicide.

Other areas in the UK also have plans and strategies in place to contextualise and accommodate specific regional and gender differences. For example, in the Essex region, there is a particular focus on prevention around younger people (<https://bit.ly/47AMaeR>). East Cheshire is also focusing on children and young people but also on men and individuals in the rural and farming communities (<https://bit.ly/4dcuDuK>).

NATIONAL STRATEGIES

National strategies have included the *NHS Long Term Plan* (NHS England, 2019) in relation to suicide, which has had different interpretations in various parts of the UK. For instance, Dorset has a zero policy on suicides (Dorset ICB, 2024), and Cheshire and Merseyside also aim for their region to be suicide free, where people in their region live in hope and suicide is not viewed as a solution (<https://bit.ly/3XwnHTm>). These are more elevated aims than the 10% reduction target that the *NHS Long Term Plan* has set out (NHS England, 2019). Many charities are regionally based, although some also cover all parts of the UK (see below). National strategies also help to promote this very difficult to discuss issue. In 2024, the London Marathon's chosen charity was the Samaritans, who are heavily involved in supporting individuals in distress, including experiencing suicidal ideation and the aftermath of suicide.

GLOBAL OUTLOOK

Internationally, it appears that many countries are experiencing issues with suicide and attempted suicide:

Every 40 seconds a person dies by suicide somewhere in the world. Over eight hundred thousand people die by suicide every year.

(World Health Organization [WHO], 2014)

However, action does appear to be beneficial and effective. For example, the all-encompassing national strategy to combat suicide in Finland has reduced the death rate of suicide by half (Prencipe et al, 2024). The main strategies include educating all health and care workers to collect data around each suicide, which has increased the pool of knowledge. Media involved

have been educated to write in a more neutral way about suicides, reducing the use of romanticisation or glorification. National strategies to limit the use and access of firearms and poisons have also been implemented. In Norway, growth in technology with the increased use of mobile phones has helped to reduce social isolation, a known risk factor for suicide, as Norway is a sparsely populated country (Motillon-Toudic et al, 2022).

The International Association for Suicide Prevention (IASP; www.iasp.info) supports the annual World Suicide Prevention Day. The triennial theme for 2024–2026 is 'Change the Narrative', previous themes have included 'Creating Hope Through Action' (2023) and '40 Seconds of Action' (2022). WHO was the co-sponsor for this day in 2024 and last year it was held on 10 September, 2025. 'Change the Narrative' is a plea for intervention to 'Start the Conversation'. The theme aims to increase awareness about how important it is to change the narrative permeating suicide in order to better understand this multi-faceted and complex societal issue. In the author's clinical opinion, this is a challenge that GPNs may well be able to address and embrace by virtue of their training, skill, knowledge and their unique setting of being embedded within their community.

WHAT IS THE ROLE OF PRIMARY CARE PRACTITIONERS?

General practice nurses are uniquely situated within the community arena to start having these conversations by asking how the individual is feeling. Changing the language and narrative is fundamental, including the importance of the words and tone of language that is used and how we engage in talking about suicide. This is a key message from the World Suicide Prevention Day.

Starting the conversation includes choosing an environment where the participant feels comfortable and safe and where there are minimal distractions. Open-ended questions can help to encourage discussion. Asking the individual directly about suicide enables them to be freer to discuss their feelings, without feeling judged (<https://bit.ly/3XQbTN8>).

If the discussion raises concerns, it is important not to be afraid to take action by referring to an appropriate organisation, following local policy guidelines and utilising the Nursing and Midwifery 'Code of Conduct' (NMC, 2018). In the author's opinion, being compassionate and using an integrated, person-centred approach will help to ensure that the individual feels supported and empowered to discuss how they feel, and the practitioner feels empowered to listen and act. Although this is not a step-by-step approach, one size fits all methodology, in the author's opinion, following robust principles, such as utilising suggested communication techniques and styles and being person-centred and adaptable in your actions can help GPNs to provide useful and supportive dialogue in often tense and stressful situations.

SUPPORT AVAILABLE

There is accessible support available. General practice nurses should feel confident to recommend such services to others, or use them as needed. They should also have access to support through supervision, line management, as well as professional support. Support appears to fall into three categories:

- Support for individuals experiencing distress
- Support for carers
- Support for the bereaved following suicide.

Examples include the Samaritans and NHS 111. The Samaritans are accessible 24 hours a day, every day of the year: 116 123 (freephone), Freepost SAMARITANS LETTERS, or Samaritans.org. There are also branches for people to visit in person and a Welsh helpline open in the evenings from 7pm until 11pm: 0808 164 0123. In England, there is NHS 111 and the same number is also for Wales NHS 111. This service provides non-emergency advice for people with concerns about a number of issues, including mental health and suicidal thoughts.

For carers, there are also several services including:

- Stay Alive — this is an app service which has help and resources for individuals who feel suicidal

or for those who are caring for these individuals

- Grassroots Suicide Prevention — a charity run by people who are passionate about preventing suicide, both clinicians and those who have lived experience, which has resources and campaigns both at local and national level: prevent-suicide.org.uk
- Carers UK — available on 0808 808 7777 and in Wales 029 2081 1370 advice@carersuk.org

Survivors' groups are for individuals who have been impacted by suicide. For example, Survivors of Bereavement by Suicide (uk-sobs.org.uk) provides support, including emotional and practical advice for individuals who are bereaved or affected by suicide.

Internationally, there is support, for example in Australia there is Lifeline (www.lifeline.org.au/), a national charity for those experiencing emotional distress which offers 24-hour crisis support and suicide prevention services: 13 11 14. Additional helplines for other international countries can be located at Befrienders Worldwide, global suicide prevention: befrienders.org.

CONCLUSION

Suicide is a very emotive topic, but by adding to the 'narrative' and discussing suicide in this article and how to support an individual experiencing these thoughts will help to allay some of the understandable fears of being involved. Importantly, it is hoped that raising this complex issue with suggested strategies of action and highlighting support available will not only help GPNs to feel more empowered and enabled to be involved, but also more comfortable with what can be an extremely difficult, highly charged and emotive situation.

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Invisible threat of air pollution and the role of healthcare professionals

Here, Deborah Waddell, paediatric respiratory specialist nurse, and Amy Bartlett, school engagement manager, both at Asthma + Lung UK, explore the effects of air pollution on health and discuss the important role healthcare professionals can play in recognising its impact, raising awareness and supporting patients to reduce their exposure. They also outline practical ways to educate and empower individuals to make positive changes within their homes, schools and communities to help protect their health.

KEY TOPICS:

- What is air pollution?
- Outdoor (ambient air pollution)
- Indoor air pollution
- Air pollution in the UK
- How does air pollution affect children?
- How can healthcare professionals make a difference?
- Tackling air pollution; building a healthier future

KEY SENTENCES:

- Air pollution is a major public health issue that affects people throughout their lives and contributes to a wide range of health conditions, particularly respiratory and cardiovascular disease.
- Both outdoor pollution, such as traffic-related emissions, and indoor pollution from sources including cooking, heating and household products can have a significant impact on health, especially among vulnerable groups such as children, older adults and people with pre-existing lung conditions.
- Healthcare professionals can help raise awareness to create healthier environments.

Air pollution is a public health crisis contributing to an estimated 30,000 deaths in the UK in 2025 (Royal College of Physicians [RCP], 2025). There is no safe level of air pollution (RCP, 2025). It silently and insidiously affects us across the whole life course (Royal College of Paediatrics and Child Health [RCPCH], 2024). The cumulative effect of breathing toxic air significantly impacts health outcomes, with a strong causal link between air pollution and development of lung conditions such as asthma and chronic obstructive pulmonary disease (COPD) (Jiang et al, 2016). Breathing polluted air significantly worsens symptoms like cough, wheeze, chest tightness and breathlessness for people of all ages living with a lung condition. Breathing air that is polluted causes asthma attacks and asthma deaths (Stoianova et al, 2024). Infants and children are particularly vulnerable to the multi-system effects of air pollution (RCPCH, 2024).

Healthcare professionals are ideally placed to deliver pragmatic, achievable advice to help patients and carers understand more about air pollution and introduce small changes to reduce exposure. Programmes such as Asthma + Lung UK's Clean Air Champions, supported by the Bupa Foundation, have shown the willingness of children and young people to increase knowledge to help to protect their lungs and ensure a future with cleaner air.

AIR POLLUTION

The World Health Organization (WHO, 2026) defines air pollution as the contamination of both the

indoor and outdoor environment by any chemical, physical or biological agent. The 2021 Asthma + Lung UK report, 'The invisible threat', reminds us that harmful toxic gases are all around us, often unseen by the naked eye and pose a real danger to health. Pregnant women, children, older people and those living with lung conditions are most susceptible to the harmful effects of air pollution. They are frequently exposed to toxic air in places we are supposed to feel safe, such as schools, health centres and care homes. Analysis commissioned from Cambridge Environment Research Consultants (CERC) by Asthma + Lung UK found that almost a third of English schools are in areas with extremely high levels of air pollution (Asthma + Lung UK, 2021).

It is important for us all to understand the short- and long-term effects of breathing toxic air and to appreciate that it unjustly and disproportionately affects those on the lowest incomes who are living in the most deprived areas. We know that deprived areas often have the highest levels of air pollution (Air Quality Expert Group, 2024) and the people living in them contribute the least to emissions (Asthma + Lung UK 2026). But, what is it in the air that is causing us harm?

AIR POLLUTION IN THE UK

Air pollution is not a new issue. The industrial revolution and subsequent increased human industrial activity resulted in a significant deterioration in air quality. Coal-powered manufacturing industries in major cities in the UK created black smoke, soot and sulphur dioxide. Many cities including London, Manchester

and Birmingham were affected. People living in London in the 1940s and '50s became accustomed to living with thick smog, a mixture of smoke and fog. The noxious, dirty fogs were often referred to as 'Pea Soupers' and Londoners tried to protect themselves by using their handkerchiefs, scarves, and woolly wraps to filter the foul air and protect their lungs. The catastrophic London smog of 5th–9th December 1952 accounted for as many as 12,000 excess deaths (Bell and Davis, 2001). Since then, legislation and changes in the way we live have resulted in improvements in air quality. The Clean Air Act 1956 introduced measures to reduce air pollution with a mandated move to smokeless fuels. Coal burning has fallen dramatically. Outdoor air quality in the UK has improved significantly since the 1980s. Some air pollutants including sulphur dioxide from coal burning and lead from petrol are at a fraction of their previous levels (Department for Food, Environment and Rural Affairs [DEFRA], 2026a).

However, recent decades have seen increased road transport and inadequate control of diesel vehicle emissions. There has been a change in the air we breathe. In 2024 domestic combustion accounted for 20% of PM_{2.5} and 11% of PM₁₀ (particulate matter) emissions (DEFRA, 2026b). DEFRA provide a useful list of the main pollutants in the UK today (DEFRA, 2026c):

- Particulate matter (PM, e.g. PM₁₀ and PM_{2.5})
- Oxides of nitrogen (NO_x)
- Ozone (O₃)
- Sulphur dioxide (SO₂)
- Polycyclic aromatic hydrocarbons (PAHs)
- Benzene (C₆H₆)
- 1,3-butadiene (C₄H₆)
- Carbon monoxide (CO)
- Lead (Pb)
- Ammonia (NH₃).

Some of our most common everyday pollutants are particulate matter and nitrogen dioxide. Particulate matter is made up of particles of different sizes (Asthma + Lung UK, 2023). Larger particles from things like dust, soot, dirt or



“ Asthma + Lung UK would like to see a government funded public health awareness campaign to help people understand where they are most at risk and what they can do to protect themselves.

smoke are large enough to be seen by the human eye. The most damaging particles are the smaller 'fine' particles that you cannot see, known as PM₁₀ and PM_{2.5}, and the ultrafine particles, which are small enough to cross into the bloodstream.

In our respiratory system, PM₁₀ particles are small enough to reach airways, and PM_{2.5} can reach the alveoli. Nitrogen dioxide (NO₂) is mostly invisible. It is released from the combustion of fossil fuels, from sources such as road traffic and industrial sites. High levels of NO₂ put people at risk from asthma attacks and COPD flare-ups and can irritate the airways lining causing inflammation (Asthma + Lung UK, 2023).

The World Health Organization has set guidelines for levels of air quality (WHO, 2024). In the UK, the Air Quality Standards Regulations 2010 (DEFRA, 2026d) limits are currently much higher. Thus, Asthma + Lung UK are campaigning for the government to introduce stricter targets and achieve cleaner air for all.

INDOOR AIR POLLUTION

Children are spending more time indoors than their parents and grandparents with the average person in the UK spending less than two hours outside each day (RCPCH, 2020). The quality of the air in indoor spaces is adversely affected by multiple emissions and by the ingress of outdoor pollutants through windows, doors and ventilation systems. The coming together of the indoor and outdoor pollutants results in a sequence of chemical reactions creating 'secondary pollutants', which can potentially be more dangerous than their origin. Many people may wrongly believe that the air quality inside their home or their child's school is cleaner than the air outside. However, ultrafine particle pollution is on average 3.5 times higher inside the home than outside (Xiang et al, 2023) – something that would undoubtedly surprise many patients, parents and carers. Asthma + Lung UK would like to see a government funded public health awareness campaign to help people understand where they are most at risk and what they can do to protect themselves.

HOW DOES AIR POLLUTION AFFECT CHILDREN?

Children have very little control over the air they breathe. The United Nations Convention on the Rights of the Child 1989 (UNCRC) (United Nations, 1989) states that all children under the age of 18 have the right to the best possible health.

This includes a clean environment. The Convention reminds us that governments must be active in ensuring children survive and reach their full potential.

The Royal College of Paediatrics and Child Health Position Statement 2024 alerts us to the harmful effects of exposure to air pollution. These harmful effects commence before birth, continue in early years, through childhood and adolescence. Developing organs are affected, and the risk of chronic disease later in life is increased. Air pollution affects the whole system in both the short- and long-term. Exposure to pollutants can affect foetal growth and development and lead to preterm birth and low birth weight. Children breathing dirty air from busy roads have reduced lung function, more respiratory infections, more respiratory symptoms across the whole airway and more asthma attacks. The damage does not end in the lungs – air pollution can irritate the eyes and skin, can affect brain development, cognitive function and memory. It can affect metabolic function, type 2 diabetes and cardiovascular disease (RCPCH, 2024).

TACKLING AIR POLLUTION; BUILDING A HEALTHIER FUTURE

Box 2 provides some top tips to take away. Remember, no action is too small and there are changes we can all make to improve air quality. We can also reduce our own pollution output, such as using active travel where possible (walk/cycle/scoot instead of driving). Plus, reusing and recycling helps lower industrial emissions.

HOW CAN HEALTHCARE PROFESSIONALS MAKE A DIFFERENCE?

Healthcare professionals in primary care, community and school health services are ideally placed to help children and young people, their parents and carers to understand more about the air around them. Incorporating simple messaging into consultations can help to increase knowledge and awareness and

Box 1

Why are children more affected?

- Their lungs are growing and developing. At birth, we have around 24 million alveoli, increasing to 267 million at four years, and 600 million by 20 years of age
- The airway epithelium in children is more permeable to pollutants
- Their defences are not fully developed
- They breathe faster than adults, meaning that they inhale more air in proportion to body weight
- They are closer to the ground
- They spend more time outside
- They are less able to control their exposure

(Salvi, 2007; Doni et al, 2023).

Box 2

Top tips

Reducing outdoor exposure

- Try and stay away from busy roads, consider taking an adjacent street if safe to do so
- If possible, consider the time of day when you are outside, when is the pollution lower? Check DEFRA pollution forecast to help with this.

Reducing indoor exposure

- Open windows and doors when outdoor air quality is better
- Consider purchasing filters/purifiers
- Use volatile organic compound (VOC)-free cleaners
- Avoid domestic burning (log burners, etc)
- Keep candle, air freshener uses to a minimum
- Store household products containing VOCs safely.

Supporting patients to reduce the impact of indoor and outdoor air pollution when you have a lung condition

- Supported self-management, including education at every opportunity to include triggers and an up-to-date self-management plan
- Medicine optimisation, the right medication taken in the right way at the right time
- Managing any co-existing nasal allergy (allergic rhinitis) and nasal symptoms
- Routine review at least annually, plus reviews after attack or exacerbation
- Signposting to further advice and support, such as Asthma + Lung UK Helpline: 0300 222 5800.

“Remember, no action is too small and there are changes we can all make to improve air quality. We can also reduce our own pollution output, such as using active travel where possible... .

empower individuals to implement changes in their environments.

There are resources available, such as the RCPCH Clean Air Companion and Communication Toolkit, which encourage healthcare professionals to prepare to talk about air pollution, build their knowledge, consider air pollution conversations as ‘business as usual’, and to amplify air pollution messages with relevant resources. They stress the importance of making every contact count (MECC).

In the UK, the 2021 coroner report into the death of Ella Adoo Kissi-Debrah concluded that ‘The

adverse effects of air pollution on health are not being sufficiently communicated to patients and their carers by medical and nursing professionals' (Courts and Tribunals Judiciary, 2021). Through education and understanding, we can work together to tackle air pollution and create such needed change. **GPN**

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Sources of air pollution

- Heating: burning of fossil fuels and wood
- Cooking: gas cooking
- Smoke and vapour: exposure to second-hand smoke and vapour, candles and incense
- Sprays and aerosols: cleaning, personal care and household products
- Furniture and furnishings: furniture, carpets and underlay which contain formaldehyde
- Decorating and hobby materials: paints, varnishes, glues, strippers
- Building materials: adhesives, sealants, coatings, vinyl flooring
- Damp and mould: poor quality housing and public buildings
- House dust mite: house dust mite faeces allergen
- Pests: urine, saliva, dander allergen, pest control products
- Pets: furry and feathered pets, rodents

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