The British Association of Prosthetics and Orthotics

National Cancer Plan for England

The role of prosthetic & orthotic services

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A word from Ben Taylor

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"The report clearly shows that prosthetics and orthotics have a meaningful role to play in delivering the ambitions of the National Cancer Plan, particularly around rehabilitation, personalised care, neighbourhood delivery, and long-term survivorship. Industry welcomes this recognition and is keen to work alongside BAPO, the NHS, and wider partners to help translate that vision into practical, high-quality support for patients."

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Prosthetics & Orthotics and the National Cancer Plan

What this report shows

The National Cancer Plan sets out an ambitious vision to improve cancer survival, quality of life, and long-term outcomes for people living with and beyond cancer.

This report sets out the important contribution that prosthetic and orthotic (P&O) services can make to delivering that vision, particularly for people affected by musculoskeletal cancers and those living with the long-term functional consequences of treatment.

It shows that P&O services play a critical role in:

- supporting recovery after surgery, including limb-sparing procedures and amputation
- enabling mobility, independence, and participation in daily life, education, and work
- improving functional outcomes, patient experience, and quality of life
- supporting delivery of the NHS's wider shift from hospital to community, from analogue to digital, and from sickness to prevention

The report also identifies practical recommendations to better integrate P&O into cancer pathways, rehabilitation, personalised care, and long-term survivorship planning.

Why this matters

Although prosthetic and orthotic services are not explicitly referenced in the National Cancer Plan, they are essential to delivering many of its core ambitions.

Without timely access to expert P&O care, people may survive cancer but be left with avoidable limitations in mobility, independence, participation, and quality of life. Delayed or fragmented provision can also contribute to poorer recovery, greater inequalities in access and outcomes, and avoidable pressure on health and care services.

Without timely and effective P&O care:

- Patients may survive cancer but experience avoidable loss of function, independence and quality of life
- There is increased risk of complications, delayed recovery and higher demand on health and care services
- Inequalities in access to specialist services may be exacerbated
- Opportunities to support return to work and economic participation may be lost

From an organisational perspective, this represents:

- A quality and safety issue (functional outcomes, patient experience)
- A health inequalities issue (variation in access and provision)
- A system efficiency issue (avoidable demand and delayed recovery)

If P&O is not considered explicitly within implementation of the National Cancer Plan, there is a real risk that it remains overlooked in pathway design, workforce planning, governance, and service development.

What should happen next

As the National Cancer Plan moves into implementation, organisations and systems should consider how prosthetic and orthotic services are reflected within cancer care pathways and local delivery plans.

Key areas for consideration include:

- **Pathways and multidisciplinary teams**
  Ensuring P&O expertise is included where relevant within cancer pathways, treatment planning, and MDT structures.
- **Personalised care and rehabilitation**
  Embedding functional, rehabilitation, and P&O needs within holistic needs assessment, personalised care planning, and survivorship support.
- **Governance and leadership**
  Clarifying where P&O sits within local oversight arrangements, including cancer governance, rehabilitation leadership, and allied health professional structures.
- **Data and outcomes**
  Ensuring that functional outcomes, mobility, independence, and patient-reported measures are recognised and reviewed alongside other cancer outcomes.
- **Workforce and capacity**
  Understanding current provision, future demand, and the role of specialist P&O services in supporting a growing population of cancer survivors.
- **System planning**
  Working with Cancer Alliances and system partners to ensure P&O is appropriately reflected in implementation planning and service design.

Taking these steps will support delivery of the National Cancer Plan's ambition not only to improve survival, but to ensure that patients are able to live well, independently and with good quality of life following cancer treatment.

Executive summary

The National Cancer Plan for England (2026) sets a transformative vision: 75% five-year cancer survival by 2035, 320,000 additional lives saved, and all waiting time standards to be met by 2029. Built around three core shifts – hospital to community, analogue to digital, and sickness to prevention – the plan represents the most ambitious cancer strategy in a generation, and prosthetics and orthotics services have a role to play.

With approximately 5,300-5,900 new sarcoma diagnoses annually in the UK and limb-sparing surgery now performed in 85–90% of bone cancer cases, the demand for specialist prosthetic and orthotic (P&O) support is substantial. As the plan succeeds in improving survival rates, the population of cancer survivors living with complex functional needs will grow significantly, and P&O services must be ready to meet this demand.

The alignment between the National Cancer Plan and P&O is evident. The plan's commitment to personalised care, quality of life, return to work, and holistic support speaks directly to what P&O professionals deliver every day for patients with musculoskeletal cancers. Survival without functional independence is not the outcome any patient wants, and P&O services are uniquely placed to ensure that a longer life also means a better life.

The opportunities for integration span all dimensions of the plan. P&O care maps naturally onto neighbourhood health services, reducing hospital dependency and bringing specialist support closer to home. Digital innovation in 3D printing, smart sensors, and AI-driven gait analysis directly aligns with the plan's technological ambitions. The £10 million children's travel fund and prehabilitation programmes both create immediate entry points for P&O involvement. The plan's emphasis on patient-reported outcome measures (PROMs) and survivorship data offers a platform to demonstrate the measurable impact of high-quality prosthetic and orthotic care.

This document sets out 15 specific recommendations across three timeframes. These include embedding P&O specialists into cancer teams for relevant tumour types, incorporating P&O needs into personalised care plans, and mapping current service capacity.

The P&O profession must step forward, engage with Cancer Alliances and NHS implementation teams, and demonstrate its readiness to play a full and active role in realising this plan. The structures being built today, workforce models, service specifications, quality standards, and digital infrastructure will shape cancer care in the next decade. P&O services belong at that table, and the profession must seize this moment to secure its place in the future of comprehensive cancer care. Patients rely on it.

Introduction

Why prosthetics & orthotics are essential to the National Cancer Plan

The National Cancer Plan for England[1] sets an ambitious vision to transform cancer outcomes by 2035, with goals to save 320,000 more lives and achieve a 75% 5-year survival rate. Published on World Cancer Day, 4 February 2026, the plan is the first dedicated national cancer strategy for England in over a decade. Built around the three core shifts of the NHS 10-Year Health Plan,[2] hospital to community, analogue to digital, and sickness to prevention. The plan represents the most comprehensive commitment to cancer reform in a generation.

However, survival is only part of the story of cancer. As more people live longer with and beyond cancer, the quality of these additional years is becoming increasingly critical. There are currently over three million people in the UK living with cancer,[3] a figure projected to rise substantially over the coming decade.[3] The plan itself recognises this trajectory, committing to personalised care plans for every patient, prehabilitation and rehabilitation programmes, named neighbourhood care leads, and new standards to help patients return to work and daily life. For the first time, every patient will receive an end-of-treatment summary designed to address the cliff edge many face when active treatment ends.

For patients with musculoskeletal cancers, particularly bone and soft tissue sarcomas, these commitments carry specific and profound implications. With close to 6,000 new sarcoma diagnoses annually in the UK,[4] and limb-sparing surgery now performed in 85–90% of bone cancer cases,[5,6,7] the demand for specialist rehabilitation support is substantial and growing. Whether a patient undergoes limb-sparing surgery requiring long-term orthotic support, amputation requiring prosthetic rehabilitation, or treatment for spinal tumours requiring orthotic stabilisation, prosthetic and orthotic (P&O) services play an indispensable role in translating survival into functional independence, participation, and quality of life.

Yet P&O services are not explicitly mentioned in the National Cancer Plan. This presents both a risk and an opportunity. The risk is that as the plan moves from publication to implementation, P&O needs are overlooked in personal cancer plans, omitted from supportive oncology specifications, and absent from workforce planning and digital infrastructure. The opportunity is that the plan's architecture, its emphasis on personalised care, community-based delivery, digital innovation, return to work, and patient-reported outcomes, provides a strong and natural framework for P&O integration at every stage of the cancer pathway.

This document sets out how prosthetics and orthotics services align with the National Cancer Plan's key priorities, where the profession can contribute to its implementation, and what specific actions are needed to ensure that England's ambition to deliver world-class cancer care extends to world-class functional outcomes for all patients requiring prosthetic and orthotic care.

Key goals of the National Cancer Plan

Main Goals

Meet all cancer waiting time standards by 2029

85% of patients starting treatment within 62 days of urgent referral[1]

Achieve 75% 5-year survival rate by 2035

(up from 60% currently) – saving 320,000 more lives over the course of the plan[1]

Become a global leader in cancer outcomes by 2035

with survival rates among the best in Europe across all cancers[1]

Three core shifts (from 10-Year Health Plan)

Hospital to community

delivering more care in neighbourhoods and local settings[1,2]

Analogue to digital

technology-enabled care through the NHS App and digital tools[1,2]

Sickness to prevention

reducing avoidable cancers through primary prevention[1,2]

Key priorities

Early diagnosis & prevention

- Complete lung cancer screening roll out by 2030[1]
- Expand bowel, cervical, and breast screening programmes[1]
- Pass the world-leading Tobacco and Vapes Bill[1]
- Tackle obesity epidemic with GLP-1 medicines and healthier food environments[1]
- Develop and implement multi-cancer early detection tests (MCEDs)[1]
- Roll out catch-up HPV vaccination to eliminate cervical cancer by 2040[1]

Faster treatment & improved performance

- Deliver 9.5 million additional diagnostic tests by 2029[1]
- Invest £2.3 billion in diagnostics transformation[1]
- Expand Community Diagnostic Centres (CDCs) with 12-hour, 7-day operation[1]
- Deploy AI and robotics to speed up diagnosis and treatment planning[1]
- Invest £70 million in 28 new state-of-the-art radiotherapy machines[1]
- Establish four new NHS aseptic medicines production hubs by 2027[1]

Quality of life & patient support

- Every patient to receive a personalised assessment of needs and personal cancer plan[1]
- Named neighbourhood care lead for each patient to coordinate ongoing support[1]
- Digital-first prehabilitation programmes rolled out nationally from 2028[1]
- Support patients to stay in or return to work through Health and Growth Accelerators[1]
- Deliver up to 10,000 personalised cancer vaccines by 2030[1]
- Launch Diagnosis Connect to link patients with trusted charity support[1]

How prosthetics & orthotics fits into the National Cancer Plan

Prosthetics and orthotics services have **significant relevance** to the national cancer plan, particularly for patients with bone and soft tissue sarcomas. While not explicitly mentioned in the National Cancer Plan, P&O services are **implicitly essential** to achieving the plan's goals around quality of life, functional outcomes, and holistic person-centred care.

1 Post-surgical rehabilitation

- **Limb-sparing surgeries** for bone cancers (osteosarcoma, Ewing's sarcoma) often require orthotic support
- **Amputations** resulting from bone or soft tissue sarcomas require prosthetic limbs
- The plan's focus on **prehabilitation and rehabilitation** (digital-first programmes from 2028) creates opportunities for early P&O intervention
- Optimal functional outcomes depend on timely, expert P&O assessment and provision

2 Neighbourhood health service integration

- The plan emphasises **community-based care** delivered through neighbourhood health services and multi-disciplinary teams. P&O services should be integrated into **neighbourhood health centres** rather than patients requiring multiple hospital visits
- **Named neighbourhood care leads** should coordinate with P&O specialists as part of holistic cancer care
- Mobile P&O clinics could bring services closer to patients' homes

3 Quality of life & supportive care

- The plan prioritises **"designing cancer care around people's lives"**
- **Supportive oncology services** (being standardised with new quality frameworks) should include P&O assessment and provision
- Digital monitoring and **wearable technology** (one of the "5 big bets" which refer to the major technologies expected to transform how care is delivered over the next decade) could integrate with smart prosthetic and orthotic devices
- **Patient-Reported Outcome Measures (PROMs)** submitted via NHS App should capture functional outcomes relevant to prosthetic/orthotic users

Information on patient-reported outcome measures relevant to prosthetics and orthotics can be found in BAPO's guide **'Measuring change: an introduction to outcome measures in prosthetics and orthotics'**

4 Children and young people

- Growing children with limb loss from cancer need **regular prosthetic adjustments**
- The **£10 million annual travel fund** for children with cancer could help families access specialised paediatric P&O services
- The focus on **reducing long-term side effects** aligns with providing optimal P&O care early in the treatment pathway
- Psychosocial support standards should address **body image and adjustment** concerns for young prosthetic users

5 Return to work & activity

- The plan emphasises helping patients **stay in or return to work** through Health and Growth Accelerators
- Modern prosthetic and orthotic devices are crucial for **functional independence and employment**. Almost 1 million people of working age in the UK are living with cancer[8]
- **Prehabilitation programmes** (digital-first from 2028) should include P&O assessment before amputation surgery
- The **employer collaborative** should include guidance on workplace adjustments for employees with prosthetics/orthotics

6 Specific cancer types where P&O is essential

- **Bone cancers:** osteosarcoma, chondrosarcoma, Ewing's sarcoma
- **Soft tissue sarcomas** requiring limb amputation
- **Spinal tumours** requiring orthotic support for stability and mobility
- **Pelvic cancers** where surgical reconstruction may require orthotic support

7 Innovation & technology

- The plan's focus on **robotics** aligns with advances in robotic/bionic prostheses and neuro orthoses
- **AI and digital tools** could optimise prosthetic and orthotic device fitting and gait analysis
- **3D printing technology** for rapid prototyping of custom prosthetic and orthotic devices
- **Wearable sensors** (one of the "5 big bets") could monitor prosthetic and orthotic device performance and limb health
- Integration with the **NHS App and Single Patient Record** could enable remote P&O consultations and monitoring

8 Research opportunities

- The **6 research priorities** should include outcomes research on P&O interventions for cancer patients
- **Quality of life metrics** should capture functional outcomes and patient satisfaction with prosthetic/orthotic care
- Clinical trials for **limb-sparing surgeries** should include P&O outcome measures as standard endpoints
- Research priority: **"Fewer side effects for children and young people"** should explore optimal timing and approaches for paediatric P&O care

9 Data & outcomes

- **Digital PROMs** (to be developed for NHS App by 2029) should include validated functional assessments relevant to P&O users
- **End of treatment summaries** should include assessment of ongoing P&O needs
- Better data on **long-term survivorship needs** would highlight P&O requirements for growing children and aging adults
- National Disease Registration Service (NDRS) should track **limb-sparing vs. amputation rates** and associated functional outcomes

10 Workforce considerations

- **The NHS Long Term Workforce Plan**[9] should ensure adequate P&O specialist capacity for cancer care
- Training for **multi-disciplinary teams** should include P&O awareness, especially for oncology teams treating sarcomas
- **Advanced practice roles** in P&O could support community-based delivery in neighbourhood health services
- The plan's commitment to **5,000 annual training opportunities** for cancer-critical roles should include P&O professionals

P&O alignment with National Cancer Plan priorities

The following table demonstrates how prosthetics and orthotics services align with and support the key priorities of the National Cancer Plan:

National Cancer Plan priority	P&O service role	Implementation opportunity
Neighbourhood health services with named care leads	Community-based P&O clinics reduce hospital visits	Integrate P&O into neighbourhood health services
Personal cancer plans for every patient	P&O needs assessment included in holistic assessment	Add P&O section to personal care plan template
Digital-first prehabilitation programmes	Digital-first prehabilitation offer focusing on the needs of P&O patients to ensure optimal prosthetic and orthotic rehabilitation	Pilot P&O pre-assessment in prehab rollout
Support to stay in or return to work	Functional prosthetic/orthotic devices enable employment	Include P&O in employer collaborative workplace guidance
Technology & innovation (AI, robotics, wearables)	Advanced prosthetic and orthotic devices, smart, smart sensors, 3D printing	Research next-gen P&O as part of robotics agenda
Patient-Reported Outcome Measures (PROMs)	Functional assessments capture P&O effectiveness	Include validated P&O functional measures in digital PROMs
Children & young people: £10m travel fund, specialised care	Growing children need frequent P&O adjustments	Travel fund helps access specialised paediatric P&O services
Research priorities focused on quality of life	Research on P&O outcomes indicates that P&O services/devices improve functional recovery	Include P&O outcomes in oncology related research

Training opportunities for the prosthetic and orthotic workforce

Oncology specific prosthetic care

Cancer-related amputations, particularly from sarcomas or aggressive bone tumours, have different clinical considerations compared with trauma-related limb loss. Training should focus on prosthetic design for oncological amputations, managing residual limbs affected by radiotherapy or chemotherapy, and working with patients who have complex tissue healing issues.

Orthotic care pre, peri, and post cancer treatment

Many cancer patients develop complications before, during, and after surgery or treatment, which can signifificantly impact mobility and function. These include spinal instability following tumour removal, weakness associated with prolonged treatment, and neuropathies affecting gait. In addition, a range of other cancer-related conditions often require orthotic input but are frequently overlooked. These include skin carcinoma, particularly of the feet, requiring pressure redistribution; scrotal swelling; foot and lower limb oedema requiring appropriate accommodation; and toe nail separation.

Neurological complications are also important, including radiation-induced neuropathy, a rare but often progressive and irreversible condition that may emerge months or years after treatment, and chemotherapy-induced peripheral neuropathy (CIPN), which can present with foot drop and impaired mobility. Spinal metastases are another key consideration, often requiring spinal orthotic support for stability and pain management.

P&O professionals therefore require training in specialised orthotic solutions to address spinal tumours, cancer-related neuropathies, and the wide range of post-treatment mobility challenges encountered across the cancer pathway.

Mental health awareness and screening skills

Mental health awareness and the ability to recognise and respond to psychological need are essential components of high-quality cancer care. Many patients experience signifificant emotional and psychological challenges before, during, and after treatment, including anxiety, depression, adjustment diffificulties, and changes in identity and body image.

For patients requiring prosthetic and orthotic intervention, these challenges may be further compounded by limb loss, altered function, long-term rehabilitation, and the visible impact of treatment. Prosthetists and orthotists often develop sustained, long-term relationships with patients across the rehabilitation pathway, placing them in a unique position to recognise early signs of psychological distress.

There is therefore a clear opportunity to strengthen the role of the P&O workforce through targeted training in mental health awareness and screening. This should include the development of skills in recognising common mental health presentations, using appropriate screening tools, initiating sensitive conversations, and signposting or referring patients to specialist support where needed.

Embedding these capabilities within P&O practice would support a more holistic, person-centred approach to cancer care, ensuring that both physical and psychological needs are addressed throughout the patient journey.

There is also rehabilitation within multidisciplinary cancer teams

Cancer care increasingly runs through multidisciplinary teams that include surgeons, oncologists, physiotherapists, occupational therapists, and rehabilitation specialists. Training for prosthetists and orthotists should focus on integrating into these teams, understanding oncology treatment pathways, and coordinating rehabilitation planning from surgery through recovery.

Paediatric oncology prosthetics

Children with bone cancers such as osteosarcoma may undergo limb salvage surgery or amputation. Prosthetic care in growing children is uniquely complex. Training should cover expandable prostheses, adapting devices as children grow, and long-term functional rehabilitation after cancer treatment.

Post cancer mobility and survivorship care

Cancer survivorship is a growing field. Many patients live for decades after treatment but deal with long term physical effects. Training should focus on prosthetic and orthotic strategies that support long term mobility, fatigue management, and return to work or daily activities.

Psychosocial support in prosthetic rehabilitation

Cancer-related limb loss often carries a heavy emotional load. P&O professionals frequently become long term partners in a patient's rehabilitation journey. Training should include communication skills, trauma informed care, and supporting patients adjusting to life after cancer treatment.

Expanded digital design and manufacturing for oncology prosthetics and orthotics

Technologies like 3D scanning, CAD design, and additive manufacturing are changing how prosthetics and orthotics are made. Training programmes should help clinicians apply these tools to produce highly personalised devices for cancer patients with complex anatomical changes after surgery.

The broader point is that prosthetics and orthotics sit right at the intersection of oncology, rehabilitation, and engineering. When cancer treatment saves a life but changes a body, P&O professionals help rebuild function and independence.

"Cancer medicine often celebrates the milestone moments of surgery or chemotherapy. The quieter miracle happens later, when someone walks again, lifts a cup again, or returns to ordinary life. That is where prosthetics and orthotics live."

The scale of the challenge

Cancer affecting the musculoskeletal system represent a small but clinically significant proportion of the cancer burden, particularly among children, young people, and working-age adults.

Bone and soft tissue sarcomas account for close to 6,000 new diagnoses annually in the UK, with osteosarcoma being the most common primary bone cancer, particularly affecting teenagers and young adults[10,11]

Limb-sparing surgery is now the predominant approach for many sarcomas, with rates up to 90%, while amputation is reserved for selected cases[13]

Amputation remains necessary in approximately 5–10% of sarcoma cases, particularly when tumours involve major neurovascular structures.[13]

Spinal tumours affect 4,000 patients annually in England and Wales. By 2028, NHS projections estimate that approximately 55,000 additional people per year will be living at least five years beyond a cancer diagnosis. This growing survivorship population will substantially increase demand for the timely, evidence-based management of spinal metastases, many requiring spinal orthotics for stability and pain management[14]

Growing survival rates mean there is an expanding population of long-term cancer survivors living with the functional consequences of their treatment

As the National Cancer Plan succeeds in its mission to diagnose cancer earlier and improve survival rates, the number of people requiring P&O services will grow substantially. Without proactive integration of these services, we risk achieving longer survival at the cost of a diminished quality of life and functional independence.

The functional impact: beyond survival

The National Cancer Plan rightly emphasises that cancer care must be designed around people's lives. For patients with musculoskeletal cancers, this principle is meaningless without expert P&O intervention. The functional consequences of bone and soft tissue cancer treatment are profound.

Orthotic rehabilitation

Patients who undergo limb-sparing surgery or experience cancer-related musculoskeletal complications often face significant challenges, including limb length discrepancy, joint instability, muscle weakness, altered gait patterns, pain, and reduced functional capacity. Orthotic intervention is frequently essential to optimise mobility, prevent secondary complications, and support participation in daily activities, education, employment, and social life. Without timely and appropriate orthotic support, patients may experience:

- Progressive joint deformity and secondary osteoarthritis due to abnormal loading patterns, malalignment, and compensatory movement strategies that accelerate wear on adjacent joints
- Chronic pain limiting mobility and independence, including neuropathic pain, mechanical pain from instability, and overuse injuries in the contralateral limb
- Gait deterioration and increased falls risk, particularly where peroneal nerve damage, foot drop, weakness, or impaired motor control persist following tumour resection or treatment
- Limb length discrepancy leading to pelvic obliquity, compensatory scoliosis, and secondary spinal pain if left unmanaged
- Skin breakdown and soft tissue complications at surgical or irradiated sites, especially where altered biomechanics place abnormal pressure on vulnerable tissues
- Joint stiffness and contracture development, particularly where prolonged immobility, weakness, pain, or delayed rehabilitation reduce range of motion and compromise long-term function
- Compensatory musculoskeletal injury, including low back pain, contralateral hip or knee degeneration, and upper limb overuse associated with prolonged reliance on walking aids or altered gait mechanics
- Reduced participation in physical activity and social engagement, contributing to deconditioning, loss of cardiovascular fitness, weight gain, and wider health risks
- Delayed or impaired functional development in children and young people, where inadequate orthotic intervention may affect motor development, skeletal alignment, mobility, and participation during key growth periods
- Inability to return to work or education, with associated effects on income, independence, confidence, and long-term social participation
- Psychological impact, including reduced self-esteem, anxiety, depression, social withdrawal, and difficulty adjusting to altered body image and functional limitation
- Disruption to cancer treatment and survivorship pathways, where poor mobility, deconditioning, falls risk, or inadequate rehabilitation compromise a patient's ability to tolerate ongoing treatment or attend follow-up care
- Increased long-term healthcare utilisation, including avoidable orthopaedic intervention, pain management input, rehabilitation admissions, community support, and wider health and social care demand that could be reduced through timely orthotic provision
- Patients undergoing abdominal cancer surgery, particularly procedures involving the removal of tumours from organs such as the bowel, stomach, or nearby lymph nodes for treatment or staging, may experience reduced abdominal support during recovery, leading to pain, impaired mobility, difficulty coughing or deep breathing, delayed rehabilitation, reduced confidence in movement, and an increased risk of wound strain or postoperative complications.

Prosthetic rehabilitation

For patients requiring amputation, early and expert prosthetic intervention is critical for optimal outcomes. Modern prosthetic technology can enable remarkable functional recovery, but only when delivered through a coordinated specialist pathway. Delays or gaps in P&O provision can result in:

- Prolonged wheelchair dependence and loss of cardiovascular fitness, with associated increases in metabolic syndrome, weight gain, and risk of type 2 diabetes, conditions that further complicate rehabilitation and prosthetic fitting
- Joint contractures and residual limb complications that compromise future prosthetic potential, including hip and knee flexion contractures that develop rapidly during periods of immobility and become increasingly resistant to correction over time
- Residual limb volume instability, skin breakdown, and wound complications arising from poorly managed post-operative oedema, delayed socket fitting, or inadequate interim prosthetic provision
- Phantom limb pain and neuroma formation that become more entrenched and treatment-resistant when early mobilisation and prosthetic loading are delayed
- Compensatory musculoskeletal injury, including low back pain, contralateral knee and hip degeneration, and upper limb overuse injuries from prolonged reliance on walking aids or wheelchair propulsion
- Impaired development and growth-related complications in children and young adults, where delayed prosthetic provision during critical developmental windows affects motor skill acquisition, skeletal alignment, and peer participation
- Psychological distress, depression, and social isolation, compounded by loss of identity and independence, particularly acute in teenagers and young adults for whom body image, peer relationships, and emerging autonomy are central to wellbeing
- Disruption to cancer treatment pathways, where functional decline and deconditioning caused by inadequate rehabilitation compromise patients' ability to tolerate ongoing chemotherapy or attend follow-up appointments
- Permanent withdrawal from the workforce and economic inactivity and loss of lifetime earnings
- Increased and avoidable demand on health and social care services, including unplanned hospital admissions, extended community nursing input, and long-term mental health support that could be reduced through timely, expert prosthetic rehabilitation

Paediatric considerations

The impact of P&O needs is particularly acute for children and young people, who represent a disproportionately large proportion of osteosarcoma cases.[15] Growing children require regular prosthetic and orthotic adjustments, often every 6–12 months. The National Cancer Plan's commitment to raising the healthiest generation of children ever **cannot be achieved without addressing the P&O needs of paediatric cancer survivors**.

Alignment with the key shifts in the 10-Year Health Plan

P&O services align with the NHS 10-Year Health Plan's three fundamental shifts:[2]

1 Hospital to community (neighbourhood health services)

The plan's vision for neighbourhood health services creates an ideal framework for P&O integration. Rather than requiring repeated hospital visits, P&O care can be delivered in community settings, neighbourhood health centres, or even in patients' homes. This approach:

- Reduces travel burden for patients and families, particularly those in rural or coastal areas
- Enables more frequent monitoring and adjustment without disrupting education or employment
- Supports the plan's goal of freeing up hospital capacity for acute cancer care
- Facilitates integration with other community-based rehabilitation services

2 Analogue to digital (technology-enabled care)

The plan's emphasis on digital innovation opens exciting opportunities for P&O services:

- **AI-powered gait analysis** can optimise prosthetic and orthotic device alignment and identify problems early
- **3D scanning and printing** can accelerate custom device fabrication and reduce appointment burden
- **Smart sensors in prosthetic and orthotic devices** align with the plan's 'big bet' on wearables, enabling real-time monitoring
- **Tele-rehabilitation and remote consultations** via the NHS App can support ongoing care between in-person visits
- **Integration with the Single Patient Record** ensures P&O needs are visible across the care pathway

3 Sickness to prevention (optimising outcomes)

While primary prevention is not directly relevant to P&O services, the principle of proactive intervention is. Early P&O assessment, ideally **before surgery**, can prevent complications and optimise long-term outcomes. This aligns with the plan's emphasis on prehabilitation and proactive care planning.

Economic and social justice imperatives

The National Cancer Plan recognises that cancer disproportionately affects working-class and deprived communities and commits to narrowing health inequalities. P&O services are central to this mission in several ways.

Employment and economic participation

Evidence indicates that patients with cancer lose an average of 75 working days and a significant loss of income.[16] For patients with limb loss or limb dysfunction, **the lack of appropriate P&O services can lengthen their absence from the workforce**. Modern prosthetic and orthotic technology can enable return to work, even in physically demanding occupations, but only when delivered expertly and in a timely manner.

The plan's commitment to Health and Growth Accelerators and employer collaboratives provides a framework to ensure that P&O services support economic participation. However, **this will only succeed if P&O provision is recognised as integral to cancer rehabilitation and not an optional extra**.

Addressing geographic inequalities

Access to specialist P&O services is currently highly variable across the UK, with particular gaps in rural and coastal areas[17] that also have poorer cancer outcomes.[18] The plan's focus on neighbourhood health services and reducing the travel burden creates an opportunity to **democratise access to expert P&O care**. The £10 million annual travel fund for children and young people with cancer explicitly recognises this challenge and should facilitate access to specialised paediatric P&O services.

Quality of life as a measure of success

The plan's commitment to patient-reported outcome measures (PROMs) and quality of life metrics is commendable. However, **these measures are meaningless if they do not capture functional outcomes** that matter to patients with musculoskeletal cancers. Validated instruments measuring mobility, prosthetic and orthotic function, pain, and participation in valued activities must be incorporated into cancer PROMs to ensure that P&O needs are visible and prioritised.

The risk of omission

Currently, P&O services are not explicitly mentioned in the National Cancer Plan. This omission carries significant risk.

- **P&O needs may be overlooked** in personal cancer plans, end-of-treatment summaries, and supportive oncology specifications
- **Neighbourhood health services may be designed** without considering P&O service delivery requirements
- **Workforce planning may fail** to ensure adequate P&O specialist capacity for growing cancer survivor populations
- **Research priorities may exclude** functional outcomes and P&O innovations relevant to cancer care
- **Digital infrastructure may be built** without considering P&O-specific data, remote monitoring, or tele-rehabilitation needs
- **Quality standards and cancer manuals** may be published without P&O pathways for relevant tumour types

The consequence would be a plan that achieves longer survival but fails to deliver the quality of life and functional independence that patients value most. We would have more cancer survivors, but too many living with preventable disabilities, unemployment, and diminished life participation.

The opportunity ahead

The National Cancer Plan represents a once-in-a-generation opportunity to transform cancer care in England. By proactively integrating P&O services into every relevant aspect of the plan's implementation, we can ensure that:

- **Every patient with cancer** who has, or is at risk of developing, functional impairment requiring prosthetic and orthotic support should receive early, expert P&O assessment as a standard part of their cancer pathway, from the point of treatment planning through to long-term survivorship. This ensures that functional rehabilitation is not treated as an afterthought, but as an integral component of treatment decision-making alongside oncological outcomes.
- **P&O services are embedded** in neighbourhood multi-disciplinary teams, bringing care closer to home and reducing the burden of travel for patients who currently face long journeys to access specialist provision, particularly those in rural, coastal, and underserved communities where distances to tertiary centres can act as a barrier to timely rehabilitation
- **Digital innovation** in AI, 3D printing, and smart prosthetic and orthotic devices accelerates and improves P&O care, enabling faster socket fabrication, more precise orthotic design through digital scanning and modelling, remote monitoring of prosthetic and orthotic device use and gait patterns, and the development of adaptive devices that respond in real time to changing patient needs across the cancer trajectory
- **Research priorities** include functional outcomes and P&O innovations for cancer patients, with dedicated funding streams for studies that evaluate the clinical and cost-effectiveness of prosthetic and orthotic interventions in sarcoma survivorship, limb salvage rehabilitation, and spinal tumour management, areas where the current evidence base remains underdeveloped relative to the complexity of patient need
- **Workforce planning** ensures sufficient P&O capacity to meet growing demand, with investment in training pipelines, apprenticeship expansion, advanced practice roles, and specialist cancer rehabilitation posts that reflect the projected increases in cancer survivorship and the growing complexity of limb-sparing surgical techniques that require expert post-operative P&O management
- **Quality metrics** capture the functional outcomes that matter most to patients, including mobility, pain, return to work or education, participation in daily activities, and patient-reported experience measures, moving beyond survival and recurrence data to reflect the full impact of cancer treatment on lived function and quality of life.
- **Geographic and socioeconomic inequalities** in P&O access are systematically addressed through transparent data collection on waiting times, referral patterns, and service provision by region, with accountability mechanisms that identify and close gaps in access so that a patient's postcode, income, or proximity to a specialist centre does not determine the quality of their functional recovery

This document presents a comprehensive strategy to achieve this vision. It demonstrates how P&O services align with and supports the priorities laid out in the National Cancer Plan and provides specific, actionable recommendations. The time to act is now. As the plan moves from publication to implementation, **P&O services must be woven into the fabric of the new cancer care model from the outset**.

The following sections demonstrating the multiple touchpoints where P&O integration is essential, and outlines a practical roadmap for action. Together, we can ensure that England's ambition to deliver world-class cancer care extends to world-class functional outcomes and quality of life for all patients.

Specific recommendations for P&O integration

Immediate actions

1 **Include P&O specialists in cancer MDTs** for relevant tumour types (bone, soft tissue sarcomas, spinal tumours) P&O specialists should attend tumour MDTs for all limb and pelvic tumour cases at decision-to-operate stage and throughout post-surgical follow-up where their prosthetic/orthotic expertise will improve patient care

2 **Add P&O needs assessment** to the personalised care plans and holistic needs assessments being rolled out

3 **Map P&O service capacity** for cancer patients across NHS regions and Cancer Alliances focusing on minimising time-to-treatment and access to appropriate specialist P&O clinics

4 **Establish baseline metrics** for time from surgical decision to P&O assessment and provision

Medium-term

5 **Develop P&O pathways** within neighbourhood health services, integrating with neighbourhood care leads

6 **Create cancer-specific P&O standards** within the cancer manuals (Action 12, Chapter 3) being published from 2027

7 **Include functional outcomes with P&O** in cancer survival quality metrics and digital PROMs

8 **Pilot P&O pre-assessment** in prehabilitation programmes (digital-first rollout from 2028)

9 **Develop digital P&O pathways** accessible through NHS App for appointment booking and remote consultations

10 **Establish P&O training modules** for neighbourhood MDT members and clinical nurse specialists

Long-term

11 **Research next-generation** P&O devices for cancer survivors as part of the robotics and innovation agenda

12 **Integrate P&O data** into the Single Patient Record (being rolled out from 2028)

13 **Develop AI-supported P&O optimisation** tools aligned with the plan's technology focus (one of "5 big bets")

14 **Expand paediatric P&O capacity** to meet growing needs as more children survive cancer with long-term limb care needs

15 **Establish national P&O outcome standards** for cancer patients, measured through regular audits

Conclusion

Prosthetics and orthotics are not explicitly mentioned in the National Cancer Plan for England. Yet they are implicitly essential to delivering the plan's most ambitious commitments to quality of life, functional outcomes, and holistic person-centred care. Without expert P&O provision, the promise of world-class cancer survivorship remains incomplete for thousands of patients each year who depend on these services to walk, work, and live independently after treatment.

The plan's three core shifts, hospital to community, analogue to digital, and sickness to prevention, create a powerful framework for elevating the role of P&O services in comprehensive cancer care. Moving rehabilitation closer to home through neighbourhood teams directly addresses the geographic inequalities that currently leave patients in rural and coastal areas without timely access to specialist provision. Embracing digital innovation through AI-assisted design, 3D printing, and smart prosthetic and orthotic technologies has the potential to transform both the speed and precision of P&O care. And shifting the focus from sickness to prevention aligns directly with the core purpose of orthotics, intervening early to prevent secondary complications, preserve function, and reduce the long-term burden on patients and the health system alike.

The clinical evidence is clear: early, expert P&O intervention after limb-sparing surgery, amputation, or spinal tumour treatment improves mobility, reduces complications, accelerates return to work and education, and supports the psychological recovery that underpins long-term wellbeing. Conversely, delays and gaps in provision lead to avoidable deconditioning, contracture, chronic pain, economic inactivity, and preventable demand on health and social care services. These are not marginal concerns, they go to the heart of what the National Cancer Plan seeks to achieve.

BAPO urges the Government, NHS England, and cancer alliances to recognise prosthetics and orthotics as a critical component of the cancer care pathway and to act on this recognition by embedding P&O services into implementation planning, workforce strategies, quality metrics, and research priorities. Patients with bone and soft tissue sarcomas, spinal tumours, and other musculoskeletal cancers deserve the same standard of functional rehabilitation as they receive in surgical and oncological treatment. Achieving this will require deliberate action, but it is entirely within reach, and the National Cancer Plan provides the ideal vehicle to deliver it.

The ambitious goal of 75% 5-year survival by 2035 must be matched by an equally ambitious commitment to ensuring that survivors can live full, active, and independent lives. Prosthetics and orthotics services are essential to deliver this promise.

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Key plan chapters relevant to P&O

Chapter 2: Driving up NHS cancer performance[1]

Chapter 3: A global leader in cancer outcomes by 2035[1]

Chapter 4: Designing cancer care around people's lives[1]

Chapter 5: Delivering world class cancer care through world class research[1]

Chapter 6: Children and young people's cancer[1]

Chapter 7: Rare and less common cancers[1]

Glossary of Terms

This glossary defines key clinical, policy, digital, and workforce terms used in this report.

A

Artificial Intelligence (AI)
Computer systems capable of performing tasks that typically require human intelligence, such as analysing gait data, predicting maintenance needs, or supporting clinical decision-making.

B

BAPO (British Association of Prosthetics and Orthotics)
The professional body representing the prosthetic and orthotic workforce in the United Kingdom.

C

CAD (Computer-Aided Design)
Software used to create detailed digital models of prosthetic and orthotic devices before manufacture.

Cancer Alliance
Regional partnerships in England responsible for coordinating cancer services, implementing national cancer strategy at a local level, and driving improvements in cancer outcomes.

Cancer Manuals
Standardised clinical reference documents setting out evidence-based pathways and quality standards for the diagnosis, treatment, and management of specific cancer types. The National Cancer Plan commits to publishing these from 2027.

Chondrosarcoma
A type of primary bone cancer that develops in cartilage cells, most commonly affecting adults.

Community Diagnostic Centres (CDCs)
NHS facilities located in community settings that provide diagnostic tests including imaging and blood tests, operating extended hours to reduce the need for hospital visits.

D

3D Printing / 3D Scanning
Manufacturing and measurement processes used in prosthetics and orthotics to create custom devices from digital models, enabling rapid prototyping and highly personalised fabrication for patients with complex anatomical changes after surgery.

Diagnosis Connect
A programme announced in the National Cancer Plan to link patients at the point of diagnosis with trusted charity support and information services.

E

End of Treatment Summary
A document provided to a patient at the conclusion of active cancer treatment, summarising the treatment received, ongoing needs, and follow-up arrangements. This report argues these should include assessment of ongoing P&O needs.

Ewing's Sarcoma
A rare and aggressive form of bone cancer that most commonly affects children and young adults.

F

Five Big Bets
Five major technologies identified in the National Cancer Plan as expected to transform how cancer care is delivered over the next decade, including wearable devices and smart sensors.

G

Gait / Gait Analysis
The pattern and manner of walking; assessed clinically to inform prosthetic and orthotic prescription and rehabilitation.

GLP-1 (Glucagon-Like Peptide-1) Medicines
A class of medications used to treat obesity and type 2 diabetes, referenced in the National Cancer Plan as part of the cancer prevention agenda.

H

HCPC (Health and Care Professions Council) *
The statutory regulator for a range of health and care professionals in the UK, including prosthetists and orthotists.

Health and Growth Accelerators
Programmes outlined in the National Cancer Plan to support cancer patients in staying in or returning to employment.

Health Inequalities
Systematic, avoidable differences in health outcomes and access to care between population groups, including those defined by deprivation, geography, ethnicity, or disability.

Holistic Needs Assessment
A structured process to identify the full range of a cancer patient's physical, emotional, social, and practical needs, used to inform their personalised care plan.

HPV (Human Papillomavirus)
A common virus linked to several cancers, including cervical cancer. The National Cancer Plan includes catch-up HPV vaccination to eliminate cervical cancer by 2040.

L

Limb-Sparing Surgery (Limb Salvage Surgery)
A surgical procedure to remove a tumour from a limb while preserving the limb itself, avoiding amputation. Now performed in over 90% of bone tumour cases but often requires long-term orthotic support.

M

MCED (Multi-Cancer Early Detection Test)
A blood test designed to detect multiple types of cancer at an early stage before symptoms appear.

MDT (Multidisciplinary Team)
A group of clinicians from different professional backgrounds working collaboratively to assess and manage a patient's care; in P&O contexts, this typically includes surgeons, podiatrists, physiotherapists, nurses, prosthetists and/or orthotists, and social care professionals.

N

NDRS (National Disease Registration Service)
An NHS England service that collects and analyses data on cancer and other diseases to support research, planning, and service improvement.

Neighbourhood Health Services
A model set out in England's 10-Year Health Plan in which integrated, multidisciplinary teams deliver primary and community care at a local level, close to where people live.

NHS App
The official digital platform through which patients in England can access NHS services, including appointment booking, test results, and care records; set to become the primary interface for managing care.

NHS Long Term Workforce Plan
A national plan published by NHS England setting out the strategy for growing and developing the NHS workforce over a 15-year period, referenced in this report in relation to ensuring adequate P&O specialist capacity. Please note, the revised NHS Long-Term Workforce Plan is due to be published in 2026.

O

Orthotics
The clinical speciality concerned with the assessment, prescription, manufacture, and fitting of orthoses (external devices applied to the body) to improve function, manage deformity, or reduce pain in people with musculoskeletal or neurological conditions.

Orthotist
A regulated healthcare professional specialising in orthotics; qualified to assess patients, prescribe orthotic devices, and evaluate their clinical effect.

Osteosarcoma
The most common type of primary bone cancer, particularly affecting teenagers and young adults. Often arises in the long bones around the knee.

P

P&O (Prosthetics and Orthotics)
The combined clinical disciplines concerned with the provision of prosthetic limbs and orthotic devices to people with limb loss or musculoskeletal and neurological conditions affecting function.

Patient-Reported Outcome Measures (PROMs)
Standardised questionnaires completed by patients to assess their own health status, functional ability, and quality of life before and after treatment.

Personal Cancer Plan / Personalised Care Plan
An individualised plan developed with each cancer patient setting out their treatment, support needs, and ongoing care. This report argues that P&O needs assessment should be included within these plans.

Prehabilitation
A programme of physical, nutritional, and psychological preparation undertaken before cancer treatment (such as surgery) to improve a patient's fitness and optimise post-treatment recovery. The National Cancer Plan commits to digital-first prehabilitation programmes from 2028.

Prosthesis (plural: Prostheses)
An artificial device that replaces a missing body part, most commonly a limb, following amputation.

Prosthetics
The clinical speciality concerned with the assessment, prescription, manufacture, and fitting of prostheses (artificial limbs or body parts) for people who have undergone amputation or have limb difference.

Prosthetist
A regulated healthcare professional specialising in prosthetics; qualified to assess patients, prescribe prosthetic devices, and manage rehabilitation.

R

Residual Limb
The remaining portion of a limb after amputation, onto which a prosthesis is fitted.

Robotics
In the context of the 10-Year Health Plan, a strategic technology priority encompassing automated surgical systems, rehabilitation robots, and advanced prosthetic limbs controlled by AI and neural interfaces.

S

Sarcoma
A rare type of cancer that develops in the bones or soft tissues (such as muscle, fat, nerves, and blood vessels). Includes bone sarcomas (e.g. osteosarcoma, Ewing's sarcoma, chondrosarcoma) and soft tissue sarcomas. Approximately 5,300 - 5,900 new cases are diagnosed annually in the UK.

Single Patient Record
A proposed unified digital health record that would be accessible across all NHS and care settings, enabling seamless sharing of patient information between providers.

Smart Sensors / Wearable Technologies
Digital devices worn on or integrated into the body that continuously monitor physiological data, such as movement, gait, or vital signs, to support real-time clinical decision-making and patient self-management.

Supportive Oncology
The range of services and interventions that address the broader physical, emotional, and practical needs of cancer patients beyond direct tumour treatment, including rehabilitation, psychological support, and return-to-work programmes.

T

Tele-rehabilitation
The delivery of rehabilitation services remotely using digital technology, including video consultations and remote monitoring, enabling patients to receive prosthetic and orthotic care without attending a clinic in person.

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