



Service Provision Guidance for Prosthetic & Orthotic Services



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Glossary	3
Who has Produced this Guidance?	4
Who is This Guidance For?	5
Executive Summary	6
A call to Action.....	7
1 Introduction to Prosthetic and Orthotic Services	8
1.1 What is Prosthetics and Orthotics?	8
Prosthetics	9
Orthotics	9
Defined Specialist Professionalism	10
1.2 Who uses Prosthetic and Orthotic Services.....	11
Prosthetic Service Users	11
Orthotic Service Users	11
1.3 Service User Goals	12
1.4 The Prosthetic and Orthotic Treatment Cycle	13
2 The Need for Prosthetic and Orthotic Services.....	15
2.1 Clinical Benefits of Treatment	15
2.2 Financial Benefits.....	18
2.3 Social Benefits.....	20
2.4 Benefits for Children and Young People	21
3 Current Arrangements.....	22
3.1 Current Commissioning Arrangements	22
3.2 'In House' and 'Contracted' Services	22
3.3 Options for Service Delivery.....	24
4 Key Aspects of Service Delivery	266
4.1 Environment, Facilities & Location	27
4.2 Access to Information	28
4.3 Referral, Triage & Service Access.....	28
4.4 Appointment Logistics & Episodes of Care	31
4.5 Procurement, Provision & Timely Delivery	32
4.6 Communication with Medics & AHP Colleagues	33
4.7 Inclusion of Technical Colleagues	34

4.8 Continued Professional Development & Workforce Planning.....	35
4.9 Administrative Support.....	36
4.10 Systems & Record Keeping	36
4.11 Protecting Service Users & Staff	37
4.12 Clinical Governance	38
4.13 Stakeholders	39
4.14 Evidence Based Practice	39
5 Implementing this Guidance.....	41
5.1 Key Points	41
5.2 Steps to Effective Planning and Service Review	43
6 Principles and Expectations	44
7 Appendices	45
Appendix 1 – References	47
Appendix 2 – Contact Details.....	50

Glossary

AHPs - Allied Health Professionals

BAPO - British Association of Prosthetists and Orthotists

CAD/CAM - Computer Aided Design/Computer Aided Manufacture

CCG – Clinical Commissioning Group

CPD – Continuing Professional Development

CTEV - Congenital Talipes Equino Varus

DNA – Did Not Attend

HCPC – Health and Care Professions Council

ICT – Information Communication Technology

KPI – Key Performance Indicators

MDT – Multi-Disciplinary Team

MHRA - Medicines and Healthcare Products Regulatory Agency

NHS – National Health Service

NICE - National Institute for Health and Care Excellence

QOL – Quality of Life

RTT – Referral to Treatment

WHO – World Health Organisation

Who has produced this guidance?

The service provision guidance herein has been produced and published by The British Association of Prosthetists and Orthotists (BAPO).

These guidelines are produced with the BAPO mission statement in mind:

“to empower the profession to enable the user”

BAPO is a UK wide body that represents the interests of prosthetic and orthotic professionals. BAPO is run by its members, for its members and as such BAPO is recognised as the official professional body of the circa 1,200 Prosthetists/Orthotists registered with the Health and Care Professions Council (HCPC) in the UK.

This guidance was prepared by the Professional Affairs Committee of BAPO in collaborative consultation with a wider working party consisting of HCPC registered Prosthetists/Orthotists. BAPO has identified no conflicts of interest during production of this resource. No external funding has been sought to develop this resource. The working party represents Prosthetists/Orthotists from all nations and sectors of the workforce including representation from NHS employed clinicians, contracted service providers, academic professionals and private providers.

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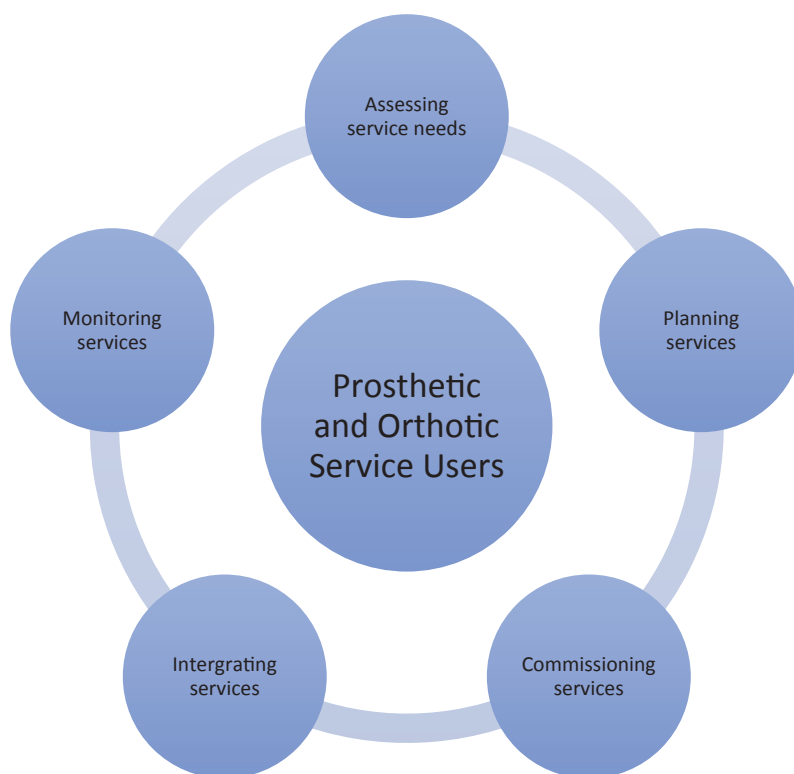
Who is this guidance for?

BAPO intends these guidelines to be used by anyone considering commissioning, procuring, developing or reviewing a prosthetic and/or orthotic service. A recent survey indicated that only 40% of those managing prosthetic and orthotic services have a clinical background in prosthetics and orthotics (1). As such, there is a need for guidance resources to act as an introductory tool for those new to prosthetics and orthotics.

This document has been produced to guide those looking to establish new services and those with established services, this document directs the reader to resources which will help them benchmark their service to allow a baseline and drive service improvement.

The following guidance explains the scope, breadth and depth of prosthetic and orthotic services with reference to the many vital benefits that these services offer to the service user, healthcare provider and wider society. Herein, BAPO discuss their recommendations for implementing the guidance presented on an operational level. The principles and expectations of quality prosthetic and orthotic services are also defined.

On a clinical level, all Prosthetists/Orthotists practicing in the UK should be familiar with these guidelines and should strive to deliver care and treatment to the service user within the framework presented. Where services fall below the standards set out, clinicians should use the guidelines to support a case for undertaking a service review process and to help drive positive change.



Executive summary

Within these pages BAPO present service provision guidance which details the requirements for 14 keys aspects of service delivery:

Environment, Facilities & Location
Access to Information
Referral, Triage & Service Access
Appointing Logistics & Episodes of Care
Procurement, Provision & Timely Delivery
Communication with Medical & AHP Colleagues
Inclusion of Technical Colleagues
Continued Professional Development & Workforce Planning
Administrative Support
Systems & Record Keeping
Protecting Service Users & Staff
Clinical Governance
Evidence Based Practice
Stakeholders

Throughout all aspects of this document, the key messages are:

	Prosthetic and orthotic services are commissioned for the service user, on behalf of the service user	
	The best interests of the service user must be considered at all stages in development of services	
	Prosthetic and orthotic services provide unique care and treatments of great clinical and wider benefit	
	Prosthetists/Orthotists require to be enabled to deliver quality treatment through careful commissioning	

A call to action

The findings of the 2016 and 2018 BAPO Workforce Surveys strongly indicate there is widespread dissatisfaction amongst Prosthetists/Orthotists as to the suitability of clinical environments, volume of caseloads and protection of service users.

The call to action is also from service users to review the state of orthotic provision in the NHS and deliver the 2015 service specification.



These three factors point to long standing failings in service design and delivery. Ultimately, this impacts upon the service user experience and the quality of care they received. Furthermore, these findings are mirrored by the detail of the 2015 'Improving the Quality of Orthotic Services in England' NHS England report narrative (2).

A recent survey showed realities of this in practice (1), reporting:

- Increasing volume of complaints
- Variances in appointment durations
- Insufficient appointment durations to complete assessments and design treatment plans
- Variances in waiting times for 1st appointments
- Variance in lead time for supply of devices following assessment
- Poor access to technologies

There are many examples nationally of efficient prosthetic and orthotic services delivering excellent care to best enable their service users. It is the objective of these guidelines to equip those involved in commissioning and service management with the details to encourage such excellence in future. This document will also provide a foundation to ensure an understanding of the minimal requirements of the Prosthetist/Orthotist in order that they are enabled to deliver high standards of care to those who rely upon their treatment.

Prosthetic and orthotic services provide essential care for some of the most vulnerable in society. Getting services right is essential for many of our service users to function, remain independent and contribute to society. We need urgent action to make our services more accessible and appropriate to enable the best for our patients

1 Introduction to Prosthetic and Orthotic Services

1.1 What is prosthetics and orthotics?

A modern healthcare system must do more than prevent illness and mortality within the population. It needs to enable citizens to live their lives, fulfil their maximum potential and optimise their ability to contribute towards family life and society. It is increasingly acknowledged that effective rehabilitation delivers better outcomes, improved quality of life and has the potential to reduce health inequalities and make significant cost savings across the health and care system (3). Prosthetic and orthotic services have a major role to play in this.

Whilst 'prosthetics and orthotics' are often considered a single profession, industry, field of science and aspect of healthcare, there are distinct differences between the two component disciplines.

Prosthetics

For those with congenital or acquired limb loss, prosthetic services provide replacement limbs which are required to be as comfortable and functional as possible to allow patients to fully realise their potential for independent living. The replacement, artificial limb is known as a *prosthesis*. The clinical skillset for providing prosthetic treatments is the role of a group of HCPC registered clinicians known as *Prosthetists*.

Prosthetists are clinicians who may assess gait and movement in order to prescribe engineering solutions to patients with upper and lower limb loss. They are specially trained at undergraduate level in mechanics, bio-mechanics, and material science along with anatomy, physiology and pathophysiology. Their qualifications make them competent to design and prescribe prostheses that replicate the structural or functional characteristics of the patient's absent limb. They treat patients with congenital limb loss as well as limb loss due to diabetes, reduced vascularity, infection and trauma. Military personnel, many of whom have complex injuries and multiple limb loss, form a notable part of their caseload.

Whilst they are autonomous practitioners, Prosthetists usually work closely with rehabilitation consultants, physiotherapists, nurse specialists and occupational therapists as part of multidisciplinary amputee rehabilitation teams (4).

Orthotics

An *orthosis* is an external device used to apply force or modify forces acting upon the human body in order to improve mobility, aid function, provide support, correct malalignment, protect, facilitate healing or reduce pain/discomfort. This is a broad term and includes devices such as: splints for the upper and lower limb, functional insoles, specialist footwear, spinal braces, neck collars, abdominal supports, conventional callipers, trusses, compression hosiery and protective helmets. The clinical skillset for providing orthotic treatment is the role of a group of HCPC registered clinicians known as *Orthotists*.

Orthotists are clinicians who assess gait and movement in order to provide engineering solutions to patients with deficits of the neuro, muscular and skeletal systems. They are extensively trained at undergraduate level in mechanics, bio-mechanics, and material science along with anatomy, physiology and pathophysiology. Their qualifications make them competent to design and prescribe orthoses that modify the structural or functional characteristics of the patients' neuro-muscular and skeletal systems enabling patients to mobilise safely, eliminate gait deviations, reduce falls, reduce pain, prevent and enable healing of ulcers. They are also qualified to modify CE marked orthoses or componentry, taking responsibility for the impact of any changes. Orthotists treat patients with a wide range of conditions including diabetes, arthritis, cerebral palsy, stroke, spina bifida, scoliosis, musculoskeletal concerns, sports injuries and trauma.

Whilst Orthotists work as autonomous practitioners, they often form part of multidisciplinary teams such as the diabetic foot care team or neuro-rehabilitation team (4). In many scenarios, orthotic input will be delivered as a component of these specialist services.

Defined Specialist Professionalism

Prosthetists/Orthotists have a solid foundation of the professional responsibilities required of all Allied Health Professions clinicians. The Prosthetist/Orthotist brings the following unique combination of specialist clinical and technical skills and knowledge to healthcare environments. It is this specific, unique matrix of competencies which equips the Prosthetist/Orthotist to lead autonomous care of the service user and best advise where their input may compliment other medical treatments. Both Orthotists and Prosthetists are supported by highly skilled technicians for manufacturing, leaving the Prosthetist/Orthotist free to concentrate on clinical skills, they work and communicate closely to ensure the best result for the patient.

**Anatomy & Physiology
Training**

Biomechanics Proficiency

**Competancy in
Engineering Principles**

Material Science Experts

Creative Design Mindset

Technical Workshop Skills

**Industry Product
Knowledge**

**Adaptability to Varied
Caseloads**

1.2 Who uses Prosthetic and Orthotic Services

The World Health Organisation (WHO) states that rehabilitation interventions should be aimed at achieving the following broad objectives (5):

- preventing the loss of function
- slowing the rate of loss of function
- improving or restoring function
- compensating for lost function
- maintaining current function

Broadly speaking, prosthetic and orthotic clinicians deliver one or more of these treatment objectives. These objectives must be considered alongside service user goals (section 1.3) in order to formulate individual treatment plans.

Prosthetic and orthotic services are relied upon to provide a wide spectrum of treatment modalities within our current healthcare pathways. Prosthetic and orthotic service users can be of any age so long as such a treatment objective correlates with those presented above.

The WHO estimate that 1 in 10 people will require specialist prosthetic and orthotic treatment at some point in their lifetime with 0.5% of the population accessing services at any one time (6). In the UK this would extrapolate to over 327,000 potential persons currently accessing services.

Prosthetic Service Users

Those with congenital limb absence will be lifelong candidates for prosthetic care from infancy.

The main cause of amputation is commonly linked to diabetes or Peripheral Vascular Disease (PVD) and is most prevalent in later life. Younger patients may undergo amputation because of less common conditions such as meningitis and osteosarcoma (cancerous bone tumours). It is estimated that a 10-year-old child whose lower limb is amputated will go on to require 25-30 prostheses in their lifetime (6).

Orthotic Service Users

Some orthotic service users may be identified at birth or infancy. Treatment of children with conditions such as congenital hip dysplasia, congenital talipes equino varus, cerebral palsy, spina bifida and global development delay are common.

Acquired trauma, neurological impairment, stroke, musculoskeletal conditions, arthritis and diabetes are treated throughout life upon diagnosis. These may require a short episode of care to resolve an acute problem or a life-long package of care if the deficit persists and conservative treatment is favoured.

It is estimated that two to four times more people will require orthotic treatment compared to prosthetic treatment (6). Those with limb loss present with a clearly identifiable need for access to prosthetic services, whereas one of the key skills of the Orthotist is to assess and identify where and if orthotic intervention is appropriate.

1.3 Service User Goals

Service users may use a prosthesis or orthosis to achieve one or more treatment goals. These include those defined by rehabilitation and re-enablement pathways (7):

Developing skills for the first time – children may require help to develop skills in order to overcome barriers presented by a range of developmental difficulties and health conditions to achieve maximum health and independence as they grow.

Recovery from unexpected illness – such as acute admission to hospital following trauma, stroke, surgical complication, infection, etc.

Management of long-term conditions – when people with a long-term medical condition may benefit from rehabilitation interventions to help them regain and maximise their independence.

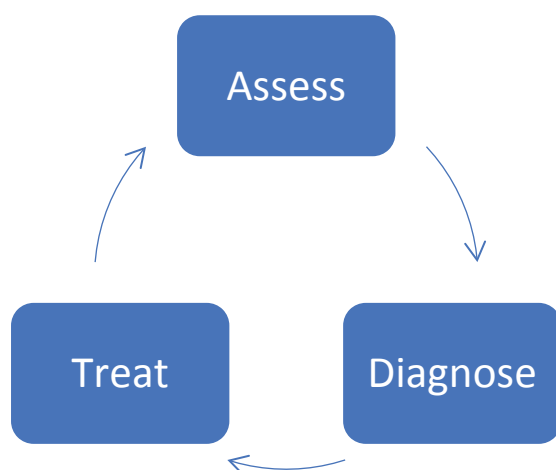
Self-manage conditions – people with a long-term condition are enabled to manage their own health and reduce the risk of developing secondary problems affecting either their mental or physical health, such as loss of strength and cardiovascular fitness, contractures, pressure ulcers, pain, anxiety and depression.

Recovery from major trauma – rehabilitation and re-enablement help people to regain and maximise their skills and independence, including returning to work.

Improve function and maximise independence – for progressive conditions: early diagnosis, assessment and intervention can help people to optimise their skills and independence for as long as possible.

1.4 The Prosthetic and Orthotic Treatment Cycle

In order to achieve the optimum outcome, Prosthetists/Orthotists undertake a streamlined 'Assess – Diagnose – Treat' process for each clinical case they encounter. These three aspects are vital components of the prosthetic and orthotic treatment cycle.



In many cases ready-made or modifiable devices may be suitable to achieve the treatment objectives and the goals of the service user. In some scenarios, provision of these may be undertaken by other members of the MDT under supervision. Principally, such dispensing activity is carefully controlled through locally developed treatment pathways, education packages and supervision processes; all under the review of the Prosthetist/Orthotist clinical team. Assistant practitioners may be recruited to work under supervision of the clinician to provide clinical logistics and support as required on a local level.

The key, unique skillset of both Prosthetists and Orthotists sits in the assessment, design and engineering of custom devices

Prosthetists and Orthotists are supported fully by a skilled manufacturing team of prosthetic and orthotic technicians who ensure that the complex prescription specification for a custom prosthesis or orthosis is realised and delivered.

The evidence base for treatment with prostheses and orthoses is growing steadily and for many conditions there are established treatment pathways and protocols (8, 9). However, for severely complex conditions and for atypical physical presentations, the needs of the service user may require

a degree of specialist clinical problem solving to address and analyse their unique biomechanical concerns.

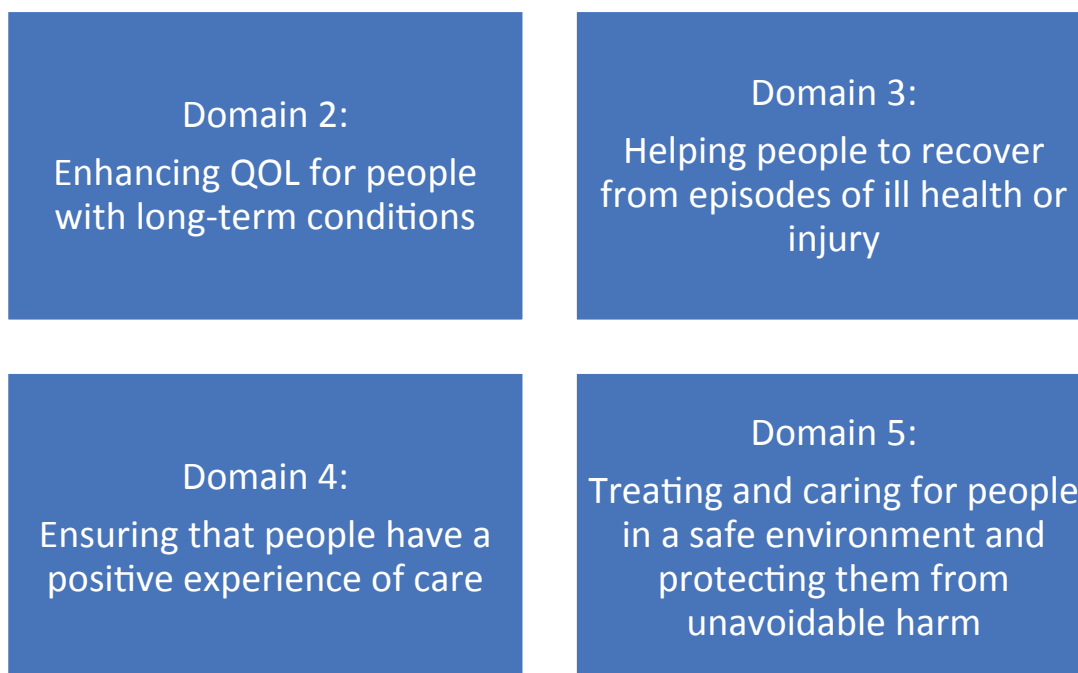
In this context, the role of the Prosthetist/Orthotist is to thoroughly assess the person and establish whether simple pathways are suitable or whether a bespoke package of care is required.

This underpins the need for individual assessment of each service user to allow for differential diagnosis and subsequent planning of treatment, coordinated by the autonomous Prosthetist/Orthotist

MDT input is often important to ensure prosthetic and orthotic treatments compliment other aspects of the service user's treatment. This ensures an optimised and holistic approach to healthcare provision. In some circumstances efficient pathways of care should allow the Prosthetist/Orthotist to deliver complete holistic care independently.

2 The Need for Prosthetic and Orthotic Services

Prosthetic and orthotic services will impact upon 4 of the 5 indicator domains as set out in the NHS Outcomes Framework (16):



2.1 Clinical Benefits of Treatment

Numerous reports have discussed the potential benefits of prosthetic and orthotic services in improving both health and quality of life for patients (6). This includes impact upon commissioning priorities such as the reduction of hospital admissions, accident and emergency attendances and prevention of complications (2).

Prosthetic and orthotic services play a major role in empowering patients to take control of their own lives and manage their conditions; reducing demands upon healthcare providers, family members and carers

Society benefits from prosthetic and orthotic services as treatments are prescribed with the goal of maximising mobility and independence.

The provision of quality care has a beneficial impact on a range of clinical conditions by relieving pain, increasing mobility, protecting tissues and promoting healing along with other benefits including improved independence and self-image.

The range of clinical conditions benefiting from prosthetic and orthotic treatment includes; chronic diseases and trauma as well as neurological, musculoskeletal and congenital conditions. Several of the conditions regularly treated within prosthetic and orthotic services remain as policy priorities for the government and the NHS (11), examples of these are set out below:

Diabetes

- o prevention and reduction of ulceration rates and amputation

Neurological conditions

- o including stroke, multiple sclerosis and cerebral palsy

Chronic obesity

- o leading to type 2 diabetes and musculoskeletal problems

Cancer

- o managing the side effects of chemotherapy including peripheral neuropathy

Cardiovascular

- o managing peripheral disease such as poor circulation

Degenerative conditions

- o including rheumatoid arthritis and osteoarthritis;

Congenital conditions

- o including spina bifida; congenital limb absence, Congenital Talipes Equino Varus (CTEV) and hip dysplasia

Spinal cord injury and scoliosis

- o Safeguarding patients during healing, providing post surgical stabilisation, halting deformity progression

Complications of viral infections

- o including polio and meningitis

Common musculoskeletal conditions and sports injuries

- o maintaining mobility and returning people to work sooner

Treatment of the frail and elderly

- o Including falls prevention

Furthermore, 6 classes of prostheses and orthoses are noted on the *WHO Global Cooperation of Assistive Technology* 'priority assistive products' top 50 list (17). These are: lower limb orthoses, upper limb orthoses, spinal orthoses, CTEV orthoses, lower limb prostheses and therapeutic footwear.

2.2 Financial Benefits

The needs of an ageing and diverse population, the changing burden of disease and rising patient and public expectations mean that innovative ways of providing effective and efficient high-quality rehabilitation outcomes must be found. There is compelling evidence that rehabilitation services can deliver long-term cost reductions and add value and equality across the health and care systems (18).

Prevention of future illness and the subsequent requirement for costly treatment is key to any efficient modern healthcare system if it is to remain viable.

Effective prosthetic and orthotic services prescribe treatments with this focus in mind to provide the commissioning healthcare provider savings in the longer term. Early intervention can prevent injury and secondary problems arising linked to existing health conditions

One strong example of this is outlined in National Institute for Health and Care Excellence (NICE) guidelines where a costing analysis of the provision of bespoke footwear and insoles to service users with high risk of ulceration demonstrated clear cost savings (19).

Moreover, these services can also provide immediate substantial financial savings to the healthcare provider. Investment in conservative treatments comes with concurrent reduced need for acute admission and for surgical intervention, both of which will save on costly in-patient episodes of care and free-up scarce hospital beds (20). Similarly, effective treatments may mean a reduction in the requirement of prescription medication such as analgesics. Furthermore, prescription of prostheses and orthoses may reduce the frequency of a service user's need to access other services such as podiatry or physiotherapy as the prosthesis/orthosis can be designed to tackle the underlying reason for which the service user attends other services for therapy/treatment. For example, a review of prosthetic alignment may help to manage lower back pain and resolve recurrent access to physiotherapy.

The cost benefits to be gained by improving the commissioning and provision of orthotic services are well argued in previous reports

In summary, savings are likely to be made by reducing the need for consultant appointments and more expensive acute care procedures, in-patient stays, drugs and surgery. Most savings are expected to be made by keeping frail, older people mobile and independent for longer and reducing the need for expensive social and residential care services. In quantitative terms, the “Orthotic Pathfinder” report (12), estimated that the economic and social consequences of denying patients orthotic care are significant, costing an estimated £390 million per annum based on 2004 data. It suggested that for every £1 spent on improving orthotics service provision, the NHS could save £4 (12).

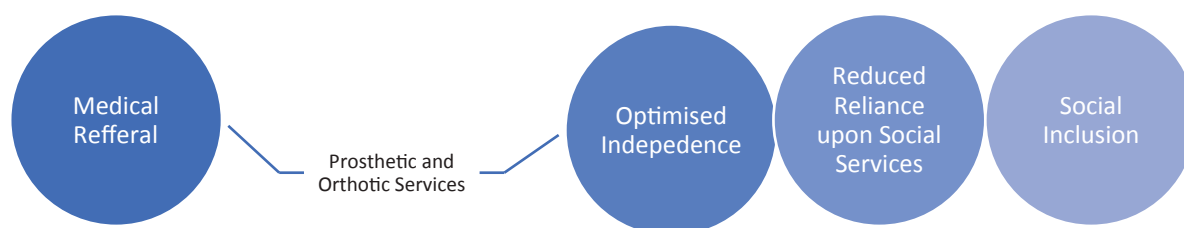
The York Health Economics Consortium report (10), quantified the potential cost savings of using orthotic interventions in primary, acute and long-term conditions compared to traditional secondary care treatment and surgery. Significant cost savings were demonstrated in the treatment of plantar fasciitis, ruptured Achilles tendon and management of diabetic foot complications respectively. Similarly, the Centre for Economics and Business Research report (21), calculated potential financial savings to the NHS and social care through the better use of orthotic interventions in the treatment of plantar fasciitis, diabetic foot complications and stroke. In addition to the specific cost savings estimated for each condition, it was estimated that around £48 million could be saved by re-locating orthotics services from secondary to primary care (10).

Often the financial matters of prosthetic and orthotic services are considered solely as spend on product. To ensure a full understanding of spend, the service should consider initial investments made in service establishment and view this alongside recurring costs such as human resource, logistics of service provision (including product procurement), expenses generated by the service user and expenses of service monitoring (6). Whilst these can seem large, these costs fade into insignificance compared to the cost on social services for providing care to someone becoming immobile and dependent.

2.3 Social Benefits

Prosthetic and orthotic services provide clear benefits to wider health and social care priorities including promoting well-being and supporting independence in the community. For example, by reducing the probability of falls in frail, older patients and keeping them mobile and independent, it is possible to reduce the need for social care interventions. Such benefits contribute greatly to reducing health inequality (6, 11). Furthermore, it is acknowledged that equipment services can help to reduce the need for acute admission to hospital and also facilitate prompt and appropriate discharge of those who have been admitted (20). As such, prosthetic and orthotic services are a vital aspect in achieving government targets for provision of care closer to home.

For adults of working age, provision of a prosthesis or orthosis may be essential for that person to continue to do so and therefore contribute to society in the same way. Prostheses and orthoses enable people to continue to contribute within the workplace whilst leading productive, healthy and dignified lives. It is clear that prosthetic and orthotic services can act as a tool to bridge the gulf that sits between medical treatment and social support services.



2.4 Benefits for Children and Young People

Service providers must consider that children and young people require to be functionally enabled by their prostheses and orthoses so as to ensure inclusive participation in their community during their development. Similarly, their confidence must be maximised in order to facilitate social integration with careful thought placed upon the crucial aesthetics of any devices being provided and subsequent impact upon feelings of self-consciousness.

It is crucially important that children and young people who need prostheses and orthoses receive these in a timely manner and that the device is well fitted and of good quality

If they must wait many months to obtain the correct prosthesis or orthosis, it could be outgrown before they are fitted and this results in endurance of unnecessary pain and immobility. It also undermines the work of the rehabilitation team and sometimes results in the need for further surgery and dependency on a wheelchair. This affects not only their physical health but also their psychological, emotional and social health. Children and young people will have changing needs as they develop and require responsive and flexible service provision otherwise they will face avoidable inequalities throughout their formative years, which could follow them through life (2).

At present, only 35% of UK services provide standalone clinics for paediatric service users. This means that children may face potential barriers to priority care and may not always be assessed by clinicians who have developed specialism in paediatric caseloads (1).

These points are hugely relevant to commissioning. If cost is considered as a prime driver, savings can be made which may increase waiting times, supply arrangements and provision times.

3 Current arrangements.

3.1 Current Commissioning Arrangements

Prosthetics in England come under specialised commissioning within NHS England. This consists of a dedicated clinical reference group of clinicians, commissioners and patient representatives who create a commissioning policy and service specification.

<https://www.england.nhs.uk/commissioning/spec-services/npc-crg/group-d/d01/>

Welsh health specialised service team

<http://www.whssc.wales.nhs.uk/all-wales-posture-and-mobility-service-p>

Ireland and Scotland have similar arrangements.

Orthotic services are commissioned locally, often packaged as part of other treatments. For example, commissioning of hip replacements may include associated costs including hip orthoses in the case of dislocation and shoe raises in the case of resultant leg length discrepancies.

There have been and continue to be challenges in the commissioning of orthotic services with a series of reports produced over the years.

We strongly recommend consideration of this guideline in conjunction with these reports in setting up orthotic services.

3.2 'In House' and 'Contracted' Services

'In House' services are where the NHS provides the clinical service directly, with NHS trusts and boards providing the facilities to run the clinics and employing the Prosthetist/Orthotist, clinical assistants and technical staff directly. Most will have onsite workshops for manufacturing. These services will undoubtedly still buy in stock and some bespoke products which cannot be manufactured on site.

'Contracted' services are where private companies provide the clinical service. Custom prostheses/orthoses are manufactured by the company either on site, or at the contractor's external premises. A fully managed 'contracted in' service may also involve the contractor being responsible for procurement of stock including off-the-shelf prosthetic and orthotic products, and provision of the clinical facilities/building. In this scenario, provision of clinic administration staff and systems may also be the role of the contractor.

The majority of NHS prosthetic and orthotic services are contracted in with a recent study reporting approximately 68% of orthotic services are provided by external companies.

In reality, many services are a hybrid of these models. An example would be a mainly 'contracted' service where the clinical staff and custom goods are provided by the contractor, but where the commissioning organisation retain control of administration and stock goods procurement. Or alternatively, a service may be mainly 'in house' where staff are directly employed by the NHS trust

(or Health Board) and most custom products are manufactured on site, but a gap in manufacturing capability requires contracts to be established for the procurement of a defined group of bespoke goods.

Examples of real-world models of service delivery can be found in the 2015 NHS England Report 'Improving the Quality of Orthotic Services in England' (2). This includes discussion of funding models. It is of note that the majority of services are funded by block contracts. Tariff based funding models are reported as under-appreciated and under-implemented (1).

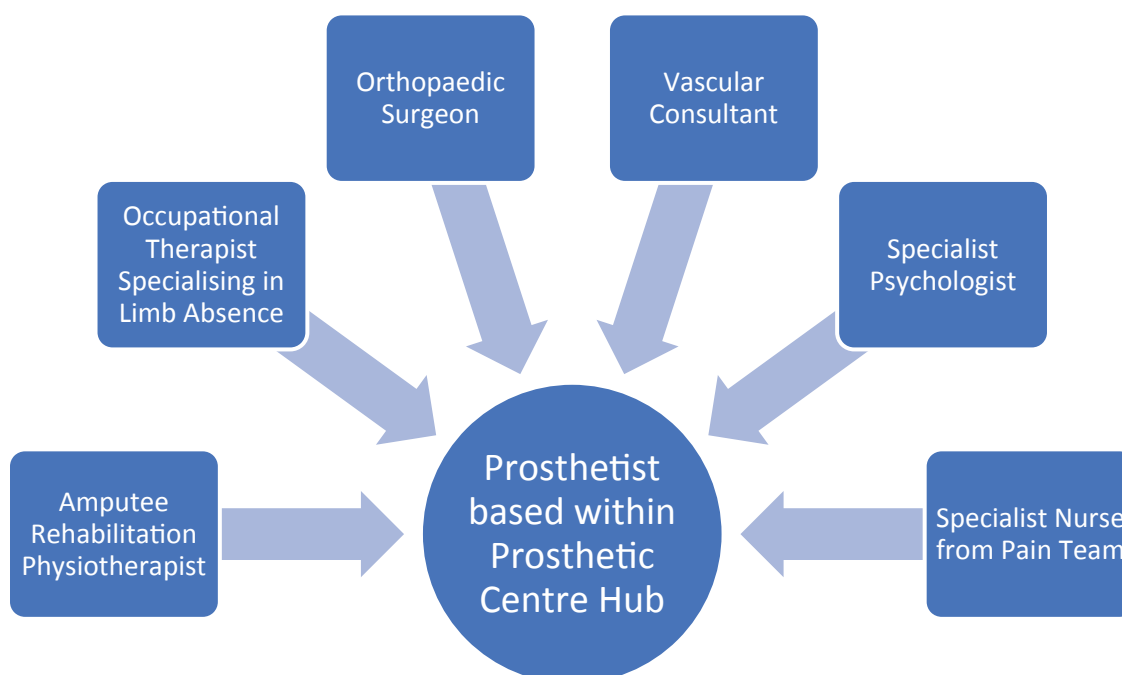
3.3 Options for service delivery

There are examples of prosthetic and orthotic services being commissioned as a joint service; typically requiring a large specially designed care centre to serve a wide region or high population base. Benefits include; sharing of administration and technical staff whilst also making efficient use of machine shop tools, workshop space, raw materials, stores and office resource.

It may be beneficial for certain prosthetic and orthotic services to be commissioned as a component element of a larger specialist MDT care centre. Typically, this would be in the guise of an integrated mobility service and may involve sharing of resources with disciplines such as wheelchairs and seating, physiotherapy and occupational therapy.

However, not all services are able/suitable to be commissioned as a dual service. Commissioners may wish to separate prosthetics and orthotics into distinct entities and provide these as standalone services, perhaps with the goal of providing care in the community rather than at specialist regional centres.

Prosthetic services lend themselves well to a hub and spoke approach, whereby those with limb absence are referred to a specialist centre for assessment and provision, with satellite clinics to provide routine care. Satellite clinics are now less common and patients usually go to enablement centres for their care. In prosthetics, the multi-disciplinary team including the rehabilitation consultant, physiotherapist, occupational therapist and psychologist/counsellor are traditionally based within the specialist centre where close working relationships are required with both orthopaedic and vascular medical teams.



The nature of an orthotic service is often more complex to define. This is because there is the requirement for orthotic input in both primary and secondary care settings. Furthermore, the caseload of potential orthotic service users is also much greater than in prosthetics. Often commissioning groups will seek standalone community based ‘general’ orthotic clinics which cater for all patients regardless of pathology or type of orthosis required, taking on referrals from medics, General Practitioners, AHPs and nursing colleagues. Hospital based orthotic clinics may be desirable when a large cohort of service users are identified with complex but similar needs. Examples of specialist orthotic clinics include; paediatrics, diabetes, stroke, neuro rehabilitation, orthopaedics and rheumatology. In these situations, it is common practice for the Orthotist to integrate themselves as a part of the MDT and take their skillset into the specialist centres to work in close partnership with the medical consultant overseeing the service:



4 Key Aspects of Service Delivery

Introduction

First and foremost, prosthetic and orthotic services are clinical services and require all of the considerations in both environment and support as for any other clinical service (22). These guidelines are an adjunctive to the national 'Model Service Specification' and seek to ensure that services enable clinicians to work within the standards set by (HCPC) (23, 24) and professional bodies (BAPO) (25).

BAPO recommend a series of subject matters for consideration when commissioning, planning or reviewing services, full details are provided below:

Environment, Facilities & Location

Access to Information

Referral, Triage & Service Access

Appointing Logistics & Episodes of Care

Procurement, Provision & Timely Delivery

Communication with Medical & AHP Colleagues

Inclusion of Technical Colleagues

Continued Professional Development & Workforce Planning

Administrative Support

Systems & Record Keeping

Protecting Service Users & Staff

Clinical Governance

Evidence Based Practice

Stakeholders

4.1 Environment, Facilities & Location

The following information provides specific recommendations for the specialist prosthetic/orthotic environment. The chief function of a prosthetic/orthotic clinic setting is to provide a safe environment for the service user and clinician to provide specialist consultation, examination and treatment.

Routinely Prosthetists/Orthotists report inadequate clinical environments which fail to protect privacy and dignity of service users

Below are listed all the features that would be expected of a main clinical centre. Where prosthetic and orthotic outreach services are conducted, efforts should be made to provide all these features:

- The service must be wheelchair accessible with an appropriate waiting area and reception facility.
- Service users must be able to be accompanied by a family member, carer or chaperone with sufficient space to accommodate all comfortably.
- Environments must offer service user privacy and protection of dignity.
- The service must have access to a couch or plinth.
- Plaster casting, scanning, Computer Aided Design/Computer Aided Manufacture (CAD/CAM), and/or alternative shape, capture and measurement facilities must be available.
- A suitably equipped, positive plaster cast rectification area should be available for prosthetic services.
- A suitable service user walkway must be available. Gait assessment, whether observational or instrumental, is critical to the process of prosthetic/orthotic practice from assessment to the final dynamic check out of devices. A 10-meter walkway should be considered a minimum to allow the clinician to undertake validated timed walking tests which are approved for outcome measurement in prosthetic and orthotic practice (26).
- There must be ready access to wheelchairs and walking aids, and to a parallel bar set up.
- Access to workshops for the manufacture, repair and adjustment of prosthesis and orthosis should be available onsite.
- Adequate storage, infection control and decontamination facilities are particularly important for safe practice. Hand washing facilities must be provided. There must be suitable disposal methods for general, clinical, infectious and sharp waste.
- There must be appropriate lighting, flooring, and ventilation, the latter is mandatory in manufacturing areas where there is heavy machinery and/or chemical use (i.e. adhesives and solvents).
- At all times there should be a focus on maintenance of the professional appearance of the service environment. This point is also applicable to the professional appearance of staff who should work within a uniform policy and maintain high personal hygiene standards.

Given that a high proportion of prosthetic/orthotic service users present with profound mobility impairment, services should be fully accessible for wheelchair users and walking distances from transport drop offs should be minimised. Accessible toilets and changing facilities would also be required.

The service should be provided in a location which is accessible for the patient caseload. Ideally the service will be near public transport links and/or parking to encourage patients to make their own travel arrangements where possible. The service will supply suitable transport services for patients who are unable to make their own way for medical reasons.

Services should be located in close proximity to adjunctive services to minimise travel for service users attending multiple appointments and to allow Prosthetists/Orthotists to easily link in with colleague AHPs such as physiotherapy, occupational therapy, podiatry, orthopaedics and musculoskeletal.

4.2 Access to Information

Throughout their contact with the service, the service user should have access to information on all aspects of their care to empower them to make informed choices (6). The service provider should be able to demonstrate that patients have access to the following:

- Key operational details of the centre such as: opening times, contact details and emergency access pathways
- Details of a named clinician allocated to each patient
- Specific written information about care and use of any prosthesis/orthosis provided, any potential problems to be aware of and what to do about them
- Conditions of provision and/or loan of the prosthesis/orthosis
- User groups and/or patient support systems in the localities served (if applicable)
- Charities and organisations providing relevant support to the service user
- Other sources of information such as web addresses and other local and national organisations
- Carer support networks and organisations

4.3 Referral, Triage & Service Access

On receipt of a referral, the clinical team should triage the referral and ensure:

- Appropriateness of referral
- Priority and urgency
- Appointment duration required
- Any special facilities or equipment anticipated to be sourced
- Skill level needed to assess the patient (Junior, Senior, Clinical lead).

The clinician will have full access to referral details including past medical history, medications, comorbidities, and previous device prescriptions – all of which may influence treatment. The clinician should also have full access to medical imaging records and may make requests for further investigations where appropriate.

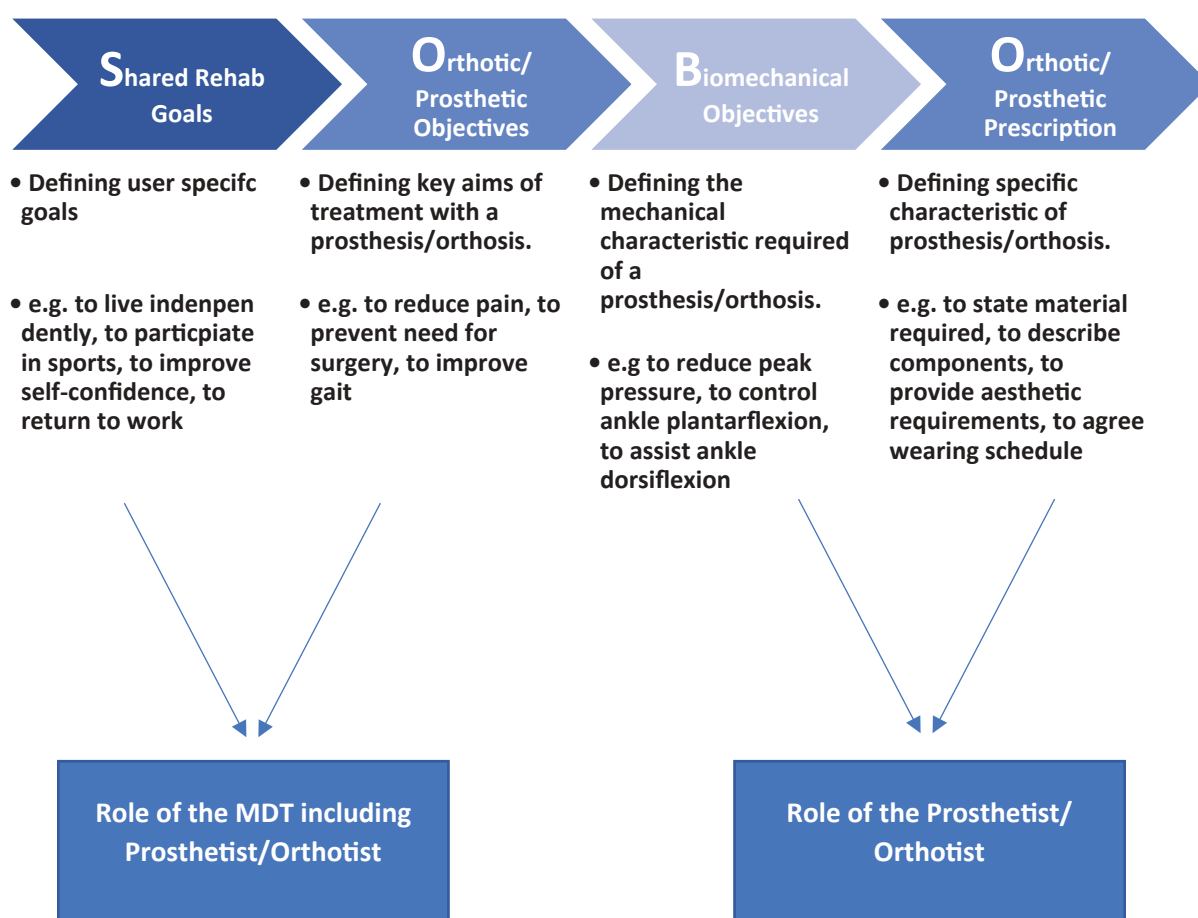
Prosthetic and orthotic services should meet national ‘referral to treatment’ (RTT) targets (1) and should ensure a patient’s first appointment is timely and timed to complement any other treatments they are receiving. For certain patients and referrals, it will be appropriate to prioritise their assessment and intervention. The service provider will be able to demonstrate that mechanisms are in place to manage new referrals to ensure patients are seen at the optimum time for their first assessment and that the service meets any national, regional or local standards that are in place.

The service should monitor adherence to triage protocols where there is a stated mandate on how this should occur.

Service users will be able to access all the necessary healthcare disciplines to meet their needs within the service and/or by referral to a suitable local provider.

The service should endeavor to minimise multiple hospital visits by combining prosthetic/orthotic appointments and other therapy appointments where viable.

Modern services will move away from specific ‘appliance requests’ provided by referrers into prosthetic and orthotic clinics which restrict service user and clinician on prescription choice. Instead, service referral forms should be designed with: Shared rehab goals, Orthotic/prosthetic objectives, Biomechanical objectives, and Orthotic/prosthetic prescription (SOBO), and referrals made should promote ‘SOBO Steps to Success’:



Clinical urgency may necessitate immediate access for service user. Scope should be provided within appointing diaries to allow treatment of unexpected emergency cases should they arise. Similarly, emergency requests for repair of a broken or faulty prosthesis or orthosis (upon which the service user is reliant) should be appointed to clinic within one working day.

Prosthetic patients may be referred either pre-operatively for elective surgery or post-operatively. Children with congenital anomalies can be referred as soon as the condition is identified i.e. parents may be referred to the service before the child is born.

Established service users should be able to self-refer at any time for review/repair/re-assessment.

Amputees not currently registered with centres should be able to be referred by GP, healthcare professional or previous prosthetic centre.

If a service user does not move address, but wishes to be seen by another service, the current service must be informed, the prospective receiving service must agree to take on care of the service user and the host clinical commissioning body must agree to fund the transfer of care.

Service users who are war pensioners and access services because of injury whilst in the armed forces are entitled to priority treatment for that condition (27).

4.4 Appointment Logistics & Episodes of Care

Episodes of care should be planned upon the completion of assessment with careful scheduling of follow up appointments. Where a series of appointments are required within an episode of care these should be scheduled at the outset to minimise timescales between appointments. Full guidance on using episodes of care within prosthetic and orthotic practice is outlined in the BAPO Standards for Best Practice (25).

The service should offer flexibility in appointment times to meet the needs of individuals and offer choice to the patient making appointments. This may include the availability of appointments outside normal working hours, if considered viable based on service user demand and available financial resources.

For the safety of the service user, the service should empower the clinician to work within BAPO recommended appointment time guidelines

The service will have a clear policy for the follow up of service users. Minimum review periods should be established for:

- Paediatric and adult user groups
- Service users undertaking their first episode of care (known as primary service users)
- Users of prosthesis and orthoses which require regular mechanical inspection and service as outlined by the manufacturer

Domiciliary visits should be an option where the need of the service user warrants this.

The service will strive to record outcome measures for every patient reviewed and all current service users will have an up-to-date care plan. The service will audit and track the proportion of records with these aspects detailed.

The service will have a discharge, onward referral and outcome reporting policy which will include Did Not Attend (DNA) protocols.

Prosthetic and orthotic services should meet national 'referral to treatment' (RTT) targets (1).

4.5 Procurement, Provision & Timely Delivery

Systems are required for prompt and accurate ordering of the prosthesis and orthosis following assessment.

Stock products should be available on a 24-hour delivery service. Bespoke products should be available in five working days for simple products, 10 working days for more complex and up to a maximum of 30 working days for complex bespoke products.

For service users dependent on their prosthesis or orthosis, a spare should be issued. Provision allowances should be in line with national policy where applicable (28).

An efficient rapid repair service should be available (to compliment the processes described in section 4.5. Quality repair services will ensure extended lifespan of each prosthesis/orthosis (6).

Services should have ability to electronically track and trace prostheses and orthoses and their componentry parts. Unique reference codes for each device and batch codes for individual components should be tied to the service user to allow manufacturer recalls to be processed.

The service should have a policy for the provision of high-cost components which is agreed with commissioners of the service and includes a process for scoping funding of exceptional cases.

The scope of services covered will be defined by the commissioning arrangements. Services should have clear protocols for signposting or managing patients who may present who are out of that scope. There are special arrangements for military personnel via the Ministry of Defence.

Unmet clinical need should be identified, quantified and brought to the attention of the commissioners for consideration for individual funding

After assessment, the service should enable timely delivery of the prosthesis/orthosis. What can be considered 'timely' varies greatly depending upon the presentation of the service user, complexity of their condition, type of prosthesis or orthoses to be supplied and readiness of access to ad-hoc resources. The service should be guided by recommendations made by the clinical team.

The service should regularly review delivery times and look to identify and remove any barrier to timely delivery.

Services should establish target timescales for delivery of 'standard' devices to 'typical' service users, particularly for the areas of practice that constitute the main volume of caseload of the service. Regular audit should be undertaken to report performance in meeting targets.

Satisfaction with speed and quality of provision should be a core theme to consider when approaching

service user representatives to garner feedback on the service

4.6 Communication with Medical & AHP colleagues

Clinicians should be enabled to make onward referrals if the outcomes for the service user could be further improved or if they may be better met by access to a different clinical service. Time will be required to discuss specific patient needs and explore adjunctive treatment options with medical and AHP colleagues.

Building relationships with referrers improves communication and optimises service efficiency. Services should be delivering training to referrers on treatment and prescription options to ensure receipt of thorough, appropriate referrals and also ensure that the wider healthcare workforce are skilled to identify potential prosthesis or orthoses users. Outcome reporting should be undertaken to ensure that, at the end of the episode of care, the referrer is aware of the findings of assessment, prescription rationale, treatment success and future plan.

Time and resources should be provided to enable the clinician to undertake training and supervision of prosthetics and orthotic students, graduates and assistants should they be working within the service.

Clinicians should have the ability to refer service users to counselling services and engage the service user in social prescribing.

4.7 Inclusion of Technical Colleagues

Prosthetic and orthotic technicians play a key role in the delivery of timely and quality prosthetic and orthotic treatment solutions

Ability and time should be set aside to allow the clinician to communicate with prosthetic and orthotic technicians.

Services must encourage communication channels to be multi-directional between the clinical and technical teams.

Development of working relationships with bespoke manufacturers should be encouraged to improve and/or maintain 'right first time, on time' rates (29).

Development of working relationships with stock manufacturers should be encouraged to allow: local product training, awareness of innovative or new products, feedback discussions with the supplier and procurement negotiations.

Processes should be in place to allow technicians to participate in clinical procedures under the supervision of the clinicians. Normally this would be during events such as device fittings, particularly in more complex cases (This wouldn't happen in prosthetics). Prosthetic technicians may see patients on their own for limited repairs etc.

Non-conformance processes will be established with regular review of performance.

4.8 Continued Professional Development & Workforce Planning

Clinicians must keep up to date with treatment options and the continually expanding evidence base to support and guide treatment rationale.

Clinicians must keep up to date with advances in materials, techniques, componentry and associated products.

Continued Professional Development (CPD) is a mandatory aspect of HCPC registration, and the service provider must ensure sufficient time is set aside to allow the clinician to participate fully in this task (23, 24).

Services must ensure that staffing numbers are appropriate for caseloads and that competency frameworks are in place to ensure that the skillset of the clinical team is sufficient to meet the needs of the service users

Meeting the needs of the ageing population is a concern for the national prosthetic and orthotic workforce with increased demand for clinical expertise linked to the rising prevalence of obesity, diabetes, cardiovascular and peripheral vascular diseases (30). The service should have a workforce plan to blueprint how they will develop their clinical team going forward. This should be based on any identified local factors which indicate that changes to the clinical skillset may be required in the future. BAPO direct commissioners to the nationally approved career framework, education framework and preceptorship guide (31-33).

The service must have structured arrangements to allow management to support staff to develop and improve. Up to date records of staff training should be held. Individual learning needs should be identified and regularly reviewed alongside performance. Preceptorship for new graduates and a clinical supervision programme should be implemented.

The service will have a clear management structure and leadership development programme.

4.9 Administrative Support

The clinician should have access to support staff to meet all administrative tasks required at a local level.

Service users must be given contact details for administrative and appointment booking purposes.

Administrative staff must be given training on the scope and nature of the service to best act as a strong link between the service user and clinician.

4.10 Systems & Record Keeping

Services should enable the clinician to meet all aspects of clinical record keeping and storage as set out in professional standards (24). Digital systems should meet the same standards expected when processing physical hardcopies.

Organisations which employ professional staff who make patient records are the legal owners of those records. Clinicians, however, have a duty to protect the confidentiality of those records. Where a professional is contracted to provide a clinical service to another organisation, contractual conditions will normally specify the legal owner of any records.

‘Shared’ or ‘integrated’ record keeping systems (to which all members of the healthcare team contribute) may be used in some situations in accordance with an agreed local protocol.

The centre should have an integrated Information Communication Technology system which enables the service to store and manage information and run operational systems. The system should be able to provide:

- service user demographic information
- clinical note keeping
- referral and transfers between centres
- financial information
- appointment utilisation
- equipment/components currently and previously issued

The management of any systems in use within centres will comply with the Department of Health Policies for Information Governance (34).

A recent study reported that:

‘The UK needs to establish appropriate processes to record the quality of service provision to enable

improvements in clinical management and to get good value for money' (1)

4.11 Protecting Service Users & Staff

Service providers will train all staff in safeguarding and a named person will act as safeguarding lead, with links to local community and emergency safeguarding services established.

The service will ensure service users' rights to privacy and ensure that dignity is maintained at all times

The service should be able to respond to requests for a patient's chosen person: a partner, carer, relation, guardian or advocate, to accompany them during their treatment.

The service user may make a request for treatment by a clinician of the same sex, this should be accommodated where possible. All services users should have access to a suitable chaperone if requested or required during service user treatments.

The clinician and service user must have access to interpreting services and not be reliant on non-licensed interpretation provided by a relation or friend.

Comprehensive print guidance should be made available to help the service user, and their carer where applicable, safely understand and utilise the prosthesis/orthosis prescribed. Similar documentation will be available to instruct and advise on common areas of self-management care. Printed resources are not universally accessible by all patients and therefore the service should be able to demonstrate equality considerations by providing flexible guidance arrangements based on the foremost needs and capabilities of the service user.

Incident and near miss reporting systems should be in place and monitored for all health & safety and medical device concerns.

The service should have a planned preventative maintenance program to ensure all prescribed devices are serviced within manufacturers stated timescales.

The service should have a detailed safe staffing policy in line with guidance produced by NHS Improvement (NHSI) (35).

The service should have a policy detailing zero tolerance to bullying, discrimination and harassment.

'Off-label use' is when a medical device is adapted, altered or used in a manner other than that specified by the manufacturer. Services should have risk assessment procedures in place where 'off-label' devices are in use. These should meet Medicines and Healthcare products Regulatory Agency MHRA stipulations (36).

Clinical and patient facing staff will be subject to ongoing need for criminal and disclosure checks as appropriate depending upon the region of the UK.

4.12 Clinical Governance

Clinical governance is 'a framework through which organisations are accountable for continually improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish' (37, 38).

Services must engage in regular audit of performance in all aspects of service delivery including clinical, technical and administrative areas. The service will routinely monitor and review the service against agreed key performance indicators (KPIs). A DNA rate of 5% or below should be the standard; presently the national mean sits at 8% (1).

Services must adopt evidence-based practice and establish recommended treatment pathways for service users which are underpinned by this. Services must contribute to national outcome measures to support national guidance.

The service provider will be able to demonstrate the following:

- All patients have a full assessment of their needs by the multidisciplinary team on referral to the service and at appropriate intervals after this where necessary
- Patients receive the most appropriate treatment to meet their needs
- The role of each member of the team in the care pathway
- Clear criteria in place to identify the range of prescription options that are made available to service users based upon presentation of the individual
- A record is kept of audit activity in relation to clinical effectiveness of treatment
- There are policies in place to cover the participation of patients in research and development activity
- Processes are implemented to oversee the introduction of new treatment modalities should these arise or when novel components are introduced to the marketplace

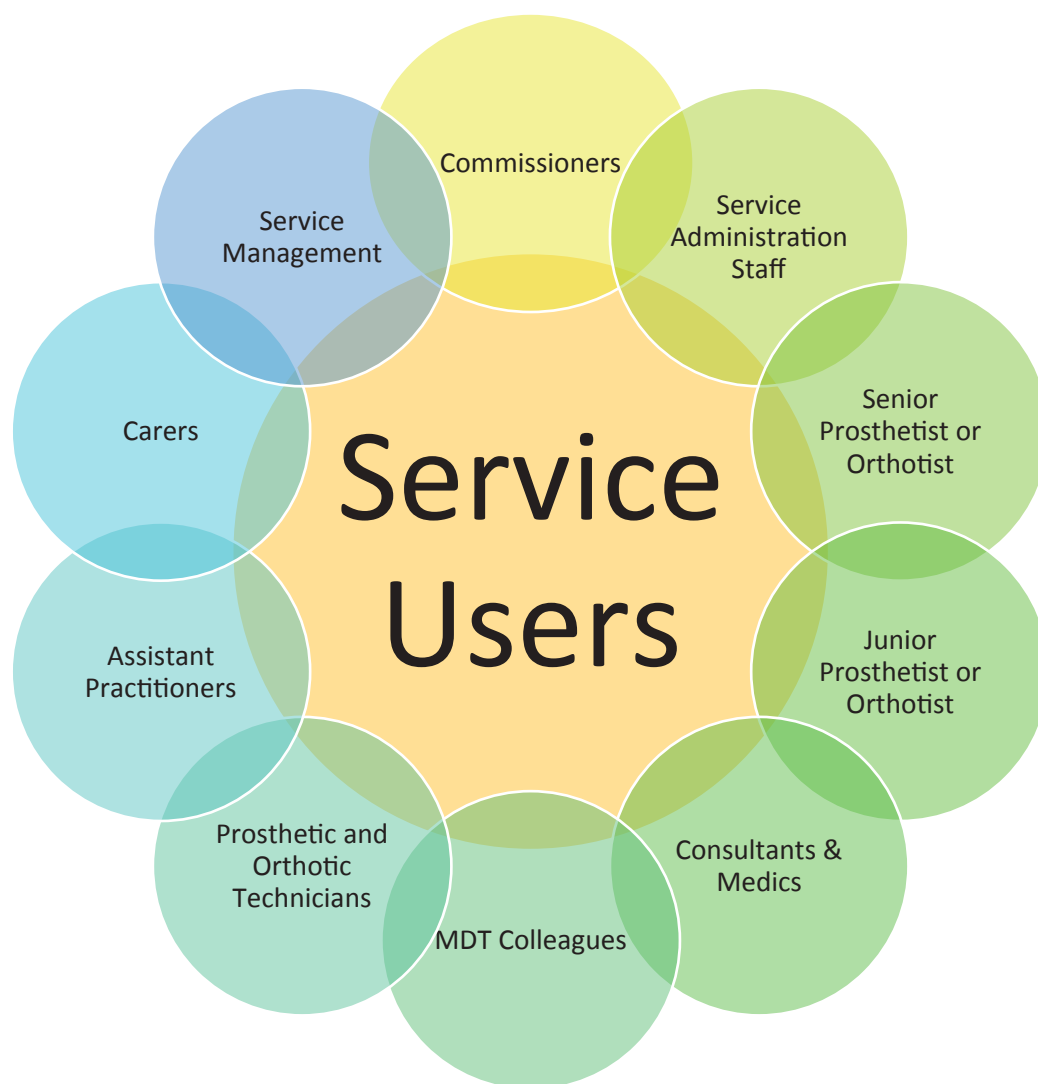
Services must have a strategy for acceptance and responding to compliments and complaints from their service users. Similarly, services should actively seek to involve and consult local service user groups regularly.

A quality system should be in place (e.g. ISO) to monitor and improve standards of service. This includes quality of technical work being carried out, quality of product and quality of service provision.

The service should have policies to cover all aspects of health and safety and demonstrate monitoring and action plans to resolve problems. This includes industry specific equipment issues (such as MHRA reporting, component reuse and component maintenance, etc.) and general workplace issues (such as incident reporting, moving and handling, first aid, fire safety, infection control, etc.)

4.13 Stakeholders

Services without active stakeholder engagement risk stagnation (6). The practice of having a meaningful dialogue with provider organisations and local populations produces huge benefits as building partnerships enables a shared vision of which outcomes are most valued (13). For these reasons, services should establish stakeholder representative groups. The make-up of these will vary on a local level but should include:



The service must ensure that it promotes itself and its actions to all within the stakeholder group. The stakeholder group should be consulted regarding any proposed changes in service delivery.

Service management will have a regular and active presence in clinical environments to walk the patient journey through the service and consider service delivery from the clinician's viewpoint.

4.14 Evidence Based Practice

Where sufficient guidelines and literature are published, services should establish treatment pathways which are supported by quality evidence and adapted to sit within the framework of the service model.

The service will identify 'priority' products and devices for key health conditions to establish treatment pathways. Areas of consideration would be products or health conditions which consume the largest financial spend or demand upon clinical time.

Treatment pathways should be reviewed cyclically. To establish whether there is updated literature on the topic, feedback should be considered from the service users and clinical success examined by reviewing outcome measures collected.

In the absence of clinical evidence, there should be a record of sound clinical reasoning in justifying treatment choice and prosthetic/orthotic provision.

***At all times, the service will align its delivery of care
with the current public health agenda and support
people to live healthier lives***

5 Implementing this guidance

5.1 Key points.

The 2015 NHS England report 'Improving the Quality of Orthotics Services in England' presented '10 Steps towards Effective Commissioning' (2). BAPO support these key recommendations:

1. Understand what orthotics care is by talking to patients, carers, managers clinicians and the MDT

2. Examine all of the funding streams you are using to fund orthotic care in your local health economy

3. Unbundle these funding streams to understand the total orthotic investment and consider using a tariff

4. Consider adopting the model service specification

5. Clarify the service delivery model you would like to use

6. Think about the location

7. Promote access and choice

8. Encourage MDT working by commissioning multi-disciplinary pathways for specific conditions

9. Look at case studies to inform the most appropriate commissioning model for your area

10. Involve service users in performance reviews of the service

In addition, BAPO propose the following when commissioning prosthetic and orthotic services:

1. Recognise the prosthetic & orthotic services already commissioned.	1. Does the clinical commissioning group (CCG) have a listing of all providers and their services?
2. Have ambition for the services & the people they serve.	2. Consider encouraging services to start small and then support them to grow.
3. Make services “join up” & have common key principles in service specifications.	3. Consider joining up with other CCGs? Share risk for less common clinical presentations by creating regional specialist clinics?
4. Prosthetic & orthotic services should not be “extra” or an “add-on”.	4. Does walking the pathway of care with a user identify any gaps or areas for improvement? Have you considered prosthetics and orthotics as integral to your sustainability and transformation plans?
5. Consider outcomes to be achieved.	5. The key principle behind commissioning for outcomes is a clear focus on the actual results being achieved and putting in place the most effective model to then achieve those results.
6. Identify some common measures & ask services to work together.	6. Establish what outcome measures are already being collected. Are they robust and can they be used for benchmarking? What processes are in place to collect information on patient experience? How is this used by providers to improve service provision?
7. Consider the range of settings where services are delivered, especially community settings	7. Have services been commissioned that focus on care closer to home? This is particularly important for prevention of admissions and maintenance of long-term conditions? Can aspects of paediatric care be delivered in schools that cater for children's additional support needs, often this is an effective way to link with the physio team. What are the governance arrangements in community settings?
8. Take a strategic view to invest to save.	8. Considered how prosthetic and orthotic services can help deliver primary, secondary and early intervention for a local diverse population? Complete an assessment identifying current inequalities in access and outcomes and future potential demand?
9. Cross-check services against the local rehabilitation model to identify gaps or duplication.	9. Are traditional aspects of prosthetic and orthotic care being undertaken by other AHP groups at present? Could these be done better or more efficiently by a standalone service? What is the limit/ceiling of treatments provided by other AHP groups?
10. Ask for advice and support if necessary.	10. What forums do you use to share good practice locally, regionally and nationally? Engage with peer review or site visits to other services that are similar.
11. Note that there is no single evidence-based model or blueprint for commissioning.	11. Commissioners require to find the best approach for any given situation with the confidence to create innovative and transformational change.

5.2 Steps to Effective Planning and Service Review

BAPO recognise the performance indicators set out within the national 'Orthotics Model Service Specification' as an important tool of use for continuous monitoring of successful service delivery (22).

The World Health Organisation suggest a four-step process which could be implemented as a service review cycle (6). It is vital to be realistic about the time expected for benefits of change to be realised and for providers to build the capacity to becoming focused to your desired outcomes.

Here BAPO has added some suggestions of questions to consider to achieve this process:

Establish a baseline

- a. What data do you have currently?
- b. What feedback do you hold?
- c. How does this compare to other services you manage?
- d. How does this compare to other prosthetic and orthotic service?

2. Prioritise for action

- a. What aspects require your foremost focus?
- b. What is feasible for you to change?

3. Prepare a strategic plan with targets

- a. Document how, what, why and when changes in services will occur.
- b. Consult your plan with your stakeholder group.
- c. Set SMART goals (*Specific, Measurable, Achievable, Realistic, and Timely*).

4. Compare against baseline

- a. Has the data or feedback changed?
- b. Is this a result of the changes you have made?
- c. Is the outcome satisfactory to the stakeholder group, principally service users?

6 Principles and Expectations

A good prosthetic and orthotic service should be based on the principles of a good rehabilitation service; good rehabilitation services will (7):

1. Optimise physical, mental and social wellbeing and have a close working partnership with people to support their needs
2. Recognise people and those who are important to them, including carers, as a critical part of the interdisciplinary team
3. Instil hope, support ambition and balance risk to maximise outcome and independence
4. Use an individualised, goal-based approach, informed by evidence and best practice which focuses on people's role in society
5. Require early and ongoing assessment and identification of needs to support timely planning and interventions to improve outcomes and ensure seamless transition
6. Support self-management through education and information to maintain health and wellbeing to achieve maximum potential
7. Make use of a wide variety of new and established interventions to improve outcomes
8. Deliver efficient and effective treatment using integrated multi-agency pathways including, where appropriate, seven days a week
9. Have strong leadership and accountability at all levels – with effective communication
10. Share good practice, collect data and contribute to the evidence base by undertaking evaluation/audit/research

Commissioners and service managers should be aware of the positive impact that prosthetic and orthotic services can have on the individual service user's quality of life. There are also wider financial savings and social benefits to be appreciated in maintaining employment, independence and reducing care needs

It has been concluded that the benefits to the NHS are still not fully realised by most commissioners and managers and there is a need to ensure that services provide 'the right care, at the right time, to the right quality without unnecessary delays' (10, 11).

Case studies that highlight the devastating outcomes that failing services inflict upon the service user are well documented and should provide a compelling call for action to all commissioners (2, 12). All commissioners (not exclusive to prosthetic and orthotic services) now face huge challenges in terms of how to deliver better care for less, how to protect fundamental principles of universal health care and how to empower service users with more control over their own care (13).

Prosthetic and orthotic services can provide a much easier and more cost-effective alternative to more complex interventions such as surgery and maybe more favourable to both the patient and the healthcare budget

Historical service models have viewed prostheses and orthoses as commodities rather than individually prescribed solutions tailored to the service users need (10). This has, to some extent, devalued the clinical skillset of the Prosthetist/Orthotist as the importance has been placed on providing products cheaply rather than focusing on the quality of specialist assessment and treatment. However, national workforce planning and upskilling of the profession has changed this landscape greatly.

In the past, those referring into prosthetic and orthotic services would provide a diagnosis and request a device with the Prosthetist and Orthotist then acting to fulfil the prescription. Such pathways are outdated making access for the service user convoluted (14), and often simplified models where the Prosthetist/Orthotist is foremost in assessment and follow up, provide greater efficiency for the wider workforce.

The *United Nations Convention on the Rights of Persons with Disabilities* mandates that healthcare systems ensure that people with disabilities are supported to achieve personal mobility for greatest possible independence (15). With this, comes a corresponding responsibility to promote and ensure the ability of access to mobility aids, devices and assistive technology; including prostheses and orthoses. The importance of ensuring efficient and quality prosthetic and orthotics services cannot therefore be understated.

7 Appendices

Appendix 1 – References

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