

June 2017 Proposal to develop a new apprenticeship standard

Page 1: Proposal to develop a new apprenticeship standard

Q1. Please confirm that you have read the "How to" guide for Trailblazers on gov.uk (see link here), that you are content that this proposal meets all the criteria for final approval set out within it and that you have discussed the proposal with a relevant Route Relationship Manager within the Institute (Please specify who).

I have read the 'how to' guide for Trailblazers on gov.uk? Yes

Name of my Relationship Manager

Bhavena Patel

Q2. Name of proposed trailblazer group

Prosthetics and Orthotics

Q3. Are you an existing Trailblazer Group already with approval to develop other standard(s)? If yes or partly, please provide full details.

No - this will be a new group

Q4. Name of proposed apprenticeship standard(s).

Degree Apprenticeship Standard for Prosthetists and Orthotists

Is this a proposed core and options standard? If yes, please give the titles for each of the options.

No. The two roles are jointly registered by HCPC so the standard is unlikely to be core and options.

How many standards are you proposing to develop? Please be aware that commitment from at least 10 employer members for each proposed standard is required.

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Will there be a requirement for additional new standards to be developed in the future? If so, please provide brief details of what these will be.

Possibly at level 3 but yet to be explored

Have you submitted a proposal for an apprenticeship standard in this role(s) before? If yes, please give details below including comments from the (pre April 2017) DfE approvals panel or the Institute.

Yes-Previous EOI submitted in April 2017, EOI was rejected this is a re-submission based on feedback

Q5. Please insert details about each proposed standard below.

| | Name of occupation | Proposed level of the standard | Proposed as a degree apprenticeship? | Intended to replace/partly replace an existing apprenticeship Framework? [if so please give details] | Do you expect any age restrictions to apply to this standard? | Estimated annual take-up across entire relevant sector(s) (This is separate to the number of apprentices that each individual employer group member will take on) | When do you estimate this apprenticeship would be ready to deliver starts? |
|----|---------------------------|--------------------------------|--------------------------------------|--|---|---|--|
| 1 | Prosthetist and Orthotist | 6 | yes | no | no | 20-30 | September 2018 |
| 2 | - | - | - | - | - | - | - |
| 3 | - | - | - | - | - | - | - |
| 4 | - | - | - | - | - | - | - |
| 5 | - | - | - | - | - | - | - |
| 6 | - | - | - | - | - | - | - |
| 7 | - | - | - | - | - | - | - |
| 8 | - | - | - | - | - | - | - |
| 9 | - | - | - | - | - | - | - |
| 10 | - | - | - | - | - | - | - |

Q6. <https://www.gov.uk/government/publications/apprenticeship-standards-in-development> Please provide any relevant information below regarding potential overlap with other Trailblazer standards published or in development. It is important that you review your proposal against all other apprenticeships published and in development to confirm there is no significant overlap, in overall occupation or in the content of potential skills/knowledge/behaviours. Where there is potential of any overlap, we ask that you contact the existing Trailblazer(s) before submitting a new proposal to discuss whether the existing standards would cover your needs (or email apprenticeship.trailblazers@education.gov.uk). Please then provide below full details of any possible overlap identified, interaction with relevant Trailblazers, and any relevant further detail explaining why this occupational role is sufficiently unique to still justify separate apprenticeship standard. The existing list of standards in development, is here [The list of existing published standards and Trailblazer contact details, is here](#)

No overlap with other standards. Prosthetist/Orthotist is a statutorily regulated occupation and individuals are required to register with the Health and Care Professions Council. Prosthetist, Prosthetist and Orthotist, and Orthotist are designated titles protected by law (Article 39 of the Order). Anyone who uses one of these titles must be on the HCPC Register.

Q7. Please provide a full description below of what the occupational role involved (or roles in the case of a proposed core and options standard). The information you provide here is crucial to our assessment of whether the occupational role is suitable for an apprenticeship, so please be as comprehensive as possible, and always refer to the criteria and guidance set out in the "How to" guide for Trailblazers. In particular, the information should include: Main duties and responsibilities - please set out clearly what someone in this occupation will actually be doing; the range of environments/sectors/industries in which someone in this occupation could work; a summary of key competencies/skills etc required for full occupational competence; how the occupational role typically fits within the wider work hierarchy; who would they be working with, and what is the usual relationship between the roles.

Definition:

A prosthesis is a device that replaces a missing body part. Orthoses are fitted to improve function, reduce deformity or support weakness of an existing body part.

About the profession:

This is a relatively small but vital profession and there are currently 1,063 registrants, of these around 1/3 are Prosthetists and 2/3 are Orthotists.

Prosthetists/Orthotists are on the UK Tier 2 Shortage Occupation List. This indicates the need to increase the numbers training in the UK.

The number of patients with an amputation or congenital limb deficiency attending specialist rehabilitation services in the UK is estimated at 55,000 to 60,000. The number of patients attending orthotic services is estimated at 1.2 million in 2007.

What is a Registered Prosthetist / Orthotist:

Registered Prosthetist / Orthotists are the only healthcare profession that are qualified to assess, measure and supply prostheses and orthoses to patients. They are autonomous practitioners. The role focusses on the rehabilitation and re-ablement of people with limb loss or impairment, neurological conditions and issues of the spine or related conditions, maximising independence, achievement of individual goals and improving both function and the quality of their lives. Prosthetist / Orthotists are Allied Health Professionals and work in hospitals and independent practices as full and equal member the clinical or multi-disciplinary team.

Prosthetists/Orthotists take the lead in the assessment and provision of prosthetic/orthotic interventions by:

- conducting the clinical and functional examination of the patient and determining the treatment and prescription required
- designing the prosthetic/orthotic intervention, including the socket or body/device interface, suspension and selection of proper components required for treatment
- making best use of available resources to achieve the best outcome for the service user without compromising service user safety or the clinical effectiveness of the intervention.
- assisting and advising on all relevant aspects of pre-surgical, post-surgical, medical and therapeutic management of the prosthetic/orthotic intervention required for treatment.
- formulating prosthetic or orthotic designs, including selection of materials and components which may include mechanical or electronic assistive mobility devices, postural management systems and wheelchairs
- delivering rehabilitation and support for service users dealing with long term illnesses by enabling them to enjoy fulfilling, independent lives with the application of a diverse range of clinical, technical and managerial skills.

Day to day skills include:

- gait analysis – observing how the body segments move in relation to each other and how they can be influenced to reduce rotational forces eg using prostheses/orthoses
- functional and static assessment skills to differentially diagnose conditions for treatment, muscle powers, joint range of motion and clinical testing for certain conditions
- designing and fitting orthoses eg braces, callipers and splints
- working with people who may have a range of conditions from complex neurological conditions, multiple amputations to short term musculoskeletal conditions or most long term conditions
- assessing a patient's needs and abilities before they have an artificial limb or orthosis fitted
- taking measurements and shape capture of the body segment using methods such as plaster of Paris modelling and scanning
- rectify the model using plaster of Paris or computer modelling to produce an accurate fit of the interface of the orthosis/prosthesis

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of the orthosis/prosthesis

- produce a design of the prostheses or orthoses
- selecting appropriate materials for manufacture to ensure the prosthesis/orthosis is fit for purpose and safe for the patient to use
- ordering or commissioning the manufacture of the finished design. This will normally be manufacture by a technician
- carrying out follow-up checks with patients to see how they are coping with their device
- making sure the prosthesis/orthosis or limb is functioning properly, and is comfortable
- carrying out adjustments or repairs

Protected by law:

Only practitioners registered with the statutory regulator, the Health & Care Professions Council (HCPC) can use the title of Prosthetist / Orthotist.

Where they work?

Prosthetists / Orthotists work based in the NHS, in hospitals, or in private clinics. They are either employed directly by the NHS or by commercial service providers commissioned to provide a service to the NHS. They often work as integral members of multi-disciplinary teams to assess, treat and manage complex clinical conditions across the age spectrum. For example they may visit specialist schools or children's wards, take part in disease or condition-specific clinics with other healthcare professionals, work in in-patient wards alongside for example stroke physiotherapists or orthopaedic surgeons.

Who do they work with?

They provide person-centred care and support to a range of different people. Some may have congenital conditions such as being born with a limb missing or a limb or spine that has not formed fully; others have lost a limb through trauma from being in an accident or during military service; and others have lost a limb or part of limb due to disease as a result of a condition like diabetes. Prosthetists / Orthotists aid movement, correct deformity and relieve discomfort for individuals using devices designed to replace, support or improve the functioning of a limb or the spine. Clinical conditions they work with may include the following (list is not exhaustive): scoliosis, polio, spina bifida, multiple sclerosis, stroke, rheumatoid arthritis, diabetes and cerebral palsy. As people's conditions and requirements may change over time and technologies improve or change, Prosthetist / Orthotists need to review and update the solutions used regularly, changing prescriptions or adapt prostheses or orthoses as required. Prosthetist/Orthotists may be involved during the acute phases of patient rehabilitation as well as providing support for chronic and life-long conditions.

Many Prosthetist / Orthotists go on to have extended roles and responsibilities within these fields, thus playing a crucial part within the multi-disciplinary team. A key role is to train and educate other health and social care workers. They often work closely with other teams such as orthopaedics, vascular and diabetes alongside Physiotherapists, Podiatrists and Surgeons and also offer support or advice and guidance to their staff or students on gait education and use of the prosthesis/orthosis.

Please provide an overview of the knowledge, skills and behaviours required for these roles.

Apprentices learn how to assess, diagnose and treat people requiring prosthetic and orthotic care. They work under the supervision of fully qualified Prosthetists/ Orthotists.

Skills

Prosthetists and Orthotists are able to:

- draw on appropriate knowledge and skills to inform prosthetic/orthotic practice, changing their practice as needed to take account of new developments or changing contexts
- conduct prosthetic/orthotic diagnostic or monitoring procedures, treatment, therapy, or other actions

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safely and effectively

- gather information and formulate prosthetic/orthotic management plans including the setting of timescales
- use prosthetic/orthotic equipment and machinery appropriately to capture and modify anthropometric, kinetic, and kinematic data safely and effectively
- provide, where appropriate, a suitable cast or electronic data to accompany the written information
- undertake and record a thorough, sensitive and detailed prosthetic/orthotic assessment, using appropriate techniques and equipment
- use contemporary technologies that aid patient assessment
- complete an accurate clinical assessment
- position or immobilise service users correctly for safe and effective prosthetic/orthotic interventions
- measure and cast for prostheses and orthoses and, where necessary, rectify them
- prescribe orthotic or prosthetic treatment including, where necessary, the specification for manufacture, and recognise the need to carry out risk analyses where required for unapproved combinations or applications of components
- undertake or arrange investigations as appropriate
- analyse and critically evaluate the information collected
- analyse normal and abnormal gait, locomotor function and movement using both qualitative and quantitative means
- demonstrate a logical and systematic approach to problem solving
- use research, reasoning and problem solving skills to determine appropriate actions
- evaluate research and other evidence to inform their own practice
- assess factors important to the relevant design specification of prostheses and orthoses and apply these when designing a device
- use information and communication technologies appropriate to their practice

Knowledge

Prosthetists and Orthotists know and understand:

- the structure and function of the human body, together with knowledge of health, disease, disorder and dysfunction, relevant to their profession
- the principles and applications of scientific enquiry, including the evaluation of treatment efficacy and the research process
- the structure and function of health and social care services, including the role of other professions
- the concept of leadership and how it applies to prosthetic/orthotic practice
- the theoretical basis of, and the variety of approaches to, assessment and intervention human structure and function, especially the human musculoskeletal system
- the aetiology and pathophysiology of human disease and general genetic principles relevant to prosthetic or orthotic practice, and recognise when disorders are not amenable to prosthetic or orthotic treatment
- the structure and properties of materials and their appropriate application to prosthetic or orthotic hardware and clinical practice
- biomechanical principles and the appropriate application of forces to the human body following prescription and supply of a prosthesis or orthosis in a manner which makes the application of such forces safe and effective in an episode of treatment
- the need to maintain all equipment to a high standard
- the impact of weight and potential level of activity of patients, and the uses that prostheses or orthoses will be subject to, as part of health and safety assessments
- the value of research to the critical evaluation of practice including a range of research methodologies the theoretical basis of prosthetic and orthotic science

Behaviours.

Behaviours are in line with the standards set by the HCPC.

Prosthetist/Orthotists treat people with dignity and respect, showing awareness of their rights and choices whilst acting in their best interests. They behave in a professional manner, are trustworthy and non-discriminatory. They maintain high standards and have empathy and compassion for those they work with.

On completion the apprentice is eligible to apply to become registered with the HCPC as a Prosthetist/Orthotist. This enables them to apply to work in any sector. As the qualification is at degree level it includes transferable skills and a depth of knowledge and understanding which can be applied in other sectors and roles eg leadership, research based practice etc.

How will the apprenticeship allow the individual to develop transferable skills to perform the role in a business of any size or relevant sector?

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Q8. Will the occupation require rigorous and substantial training of at least 12 months prior to the end-point assessment to achieve full competence, with off-the-job training accounting for at least 20% of the apprenticeship? Please provide detail of what this will include.

Yes

To become a Prosthetist/Orthotist apprentices need to take a BSc (Hons) degree in prosthetics and orthotics, accredited by Health and Care Professions Council.

HCPC will need to sign off the apprentice degree to ensure the work based elements are suitable, the employers will be responsible for ensuring the training and clinical practice elements enable the apprentice to apply the knowledge and master the skills in the workplace. No apprentices would start a degree apprenticeship until approved by the HCPC.

Prosthetists / Orthotists deal with the assessment, diagnosis and management of the whole of the body. Prosthetists provide artificial limbs (prostheses) to people who have all or part of a natural limb missing. Orthotists provide supportive braces and splints (orthoses) to people with various conditions of the limbs or spine. Prosthetists / Orthotists work with people of all ages and with a range of different requirements. Apprentices will learn how to assess, diagnose and treat people requiring prosthetic and orthotic care.

Apprentices will be released to university to be taught underpinning knowledge within the degree programme. The rest of the time the apprentice will be in their work place engaging in hands on experience and developing practical skills. They will apply the knowledge learnt at university to their day to day work. Apprentices may be moved to a range of different clinical areas to ensure that they meet all the requirements of the apprenticeship. The employer will decide how and where the clinical practice will take place. This will ensure that the apprentice receives rounded training and is able to gain experience of more than one setting. Apprentices will usually be full time and mirror the normal working hours of the department or service they are in. The apprentice will spend 4 days a week in work and 1 day a week in university throughout their apprenticeship. The work based practice will be split equally between prosthetics and orthotics and will be designed to provide apprentices with clinical situations in which they can be actively engaged in patient care. They will apply their knowledge in a practical setting and further develop their patient assessment and communication skills. Delivery may vary from employer to employer and could be achieved via block release to university.

What will the duration of the apprenticeship be?

usually 3 and up to 5 years