UPDATE

Regional reports
Prosthetic Guidelines
Committee roles

BE INSPIRED

Career reflections
Overseas projects

LEARNING

COVID-19
Clinical practice
Posters
Conference 2020

BRITISH ASSOCIATION OF CHARTERED PHYSIOTHERAPISTS IN AMPUTEE REHABILITATION

AUTUMN 2020 **ISSUE 54**

Stump Shrinkers

Stump Socks

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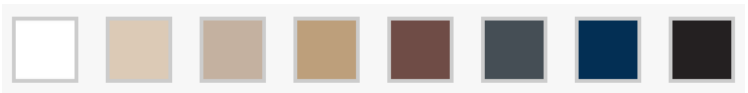

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NAQI Cica Cream is specially formulated to

- Improve the appearance of **scars**,
- Make shrinkers **slide on** more easily
- **Rebuilds** and restructures the natural skin barrier.

SIEDEN

CONTENTS

STRANGE TIMES

Julia Earle

BACPAR Chair

Clinical Specialist Physiotherapist in Amputee Rehabilitation

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CHAIR'S MESSAGE AUTUMN 2020

Just reading back on my last message in the Spring Journal I think I could repeat the first paragraph again as we seem to be in uncertain times still, changing advice and the threat of increasing numbers again just as things seem to be settling down and services restarting. I do hope that you have managed to stay well and cope with all the new challenges that have come your way.

The executive committee have just had their second virtual meeting – I think we are all getting quite good at this now! Exciting things happening in the world of BACPAR:

1) The BACPAR conference has joined forces with the Vascular Societies this year and has gone virtual. By the time this is in print the full programme will be available but I have had a sneaky peak and it looks great – and such a bargain at £25 for everything, not just the BACPAR element. Please make sure you register ASAP.

https://www.vascularsociety.org.uk/asm/vsasm_2020

2) Our Prosthetic Guidelines are in their final stages and Rachel hopes the team will have them out early in the new year.

3) The AGM will also be going virtual, another first for us, and I hope as many of you can join as possible.

The posts of Education Officer, Social Media and Treasurer will be up for election – please seriously consider the Education Officer role – see later in the journal for more about this. It would be great to get some new members to the executive committee (you can do this as a joint role if easier). They are an enthusiastic team with lots of experience and very keen to support newer members as they feel their way into a new role. You don't have to be an expert - just willing to learn!

4) Exciting possibilities concerning the BACPAR website – but I'm not telling you more, you'll just have to "come" to the AGM for that.

5) Discussions are being had amongst the regional reps as to how they can pool resources to offer online training to make up for the current difficulties in running the usual regional study days.

Enjoy the rest of the journal – it only gets better from here on, and I look forward to seeing you all in November.

Julia Earle

BACPAR Chair

WELCOME

EDITORIAL

EDITORIAL

Hello everyone and welcome to the Autumn Edition 2020. Given the times we are living through we are so encouraged by all the contributions you have offered in order to make this another bumper journal! Thank you.

After some informative 'business' pages we look back with Fiona Davie-Smith's reflections on her trip to ISPO Japan in 2019 (she received a BACPAR bursary towards this). The University of Southampton also looks back on 5 years of delivering it's MSc modules in Amputee Rehabilitation and Prosthetic Use and which is now in the process of being revalidated and likely to go from strength to strength.

As we have been gathering and editing content we appreciate there's a theme of retirement. A time for retirees to reflect on their professional career and for members to value their valuable contribution to amputee rehabilitation, and to BACPAR and SPARG. We send all best wishes to the retirees!

From the past to the present. Inevitably the Regional Reports show how few face-to-face events have been able to take place this year but virtual meetings and catch-ups are starting to happen. We have several reports on changes members and services have had to make to cope with the pandemic, logistically and emotionally, including some patient's comments that illustrate the new normal; an interesting comment is made that the 'new' patient doesn't know any different to service delivery...It will be interesting to see the impact of necessary changes to services in the longer term, and the views of more established patients who know how things used to be. Thank you for finding the time to share these changes. This section ends with a poignant poem on COVID.

We feel that one of the journal's strengths is in its clinical content with accounts of practice at home and abroad. This edition has an excellent range including case studies and views on exercise and gait, plus posters illustrating research based evidence to support practice.

The journal concludes with a new feature of member profiles – our thanks to our first 'volunteer'. So now we need you – yes YOU - to submit your profile as it's always interesting to hear the range of job roles and experiences across the membership. Don't feel you are too 'ordinary', or too inexperienced, as that is the whole point!! Equally if you work in a more unusual role then volunteer too. Much easier to volunteer than be press-ganged! Furthermore, if you are new to the speciality please share your story of how you came into this area and what your thoughts so far, we'd all be interested. One of BACPAR's strengths is its diversity; let's hear about your work in amputee rehabilitation.

Please enjoy this edition – and don't forget to let us know what you think about it!

Sue and Mary Jane

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Joint Journal Officer

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Sue Lein

Joint Journal Officer

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ELECTION OF BACPAR OFFICERS 2020 - POSTS FOR NOMINATIONS

THERE ARE THREE POSTS UP FOR ELECTION AT THE BACPAR AGM IN NOVEMBER 2020:

Education Officer

Sarah Bradbury and Adam El-Sayed are having to step down from this role due to other commitments so it's a great opportunity for someone new to take on the post – see their article for much more detail as to what this really involves but the official role description is below.

- Oversees the collaboration, development and delivery of externally provided post-graduate training endorsed by BACPAR e.g. University of Southampton MSc Amputee Rehabilitation
- Updates the 'Amputation Rehabilitation – Guidance for the Education of Pre-registration Students' every 5 years
- Works with other training providers in development and implementation of training material as appropriate e.g. Humanity and Inclusion UK and Physiopaedia

Social Media Officer

Adam El-Sayed has kindly stepped into this role as Anna Cue has had to step down and Hayley Crane is super busy with conference organisation as well as her PRO role. He is keen to continue unless anyone else wants to be nominated. The role description is below.

- Takes a lead role in moderating and policing BACPAR Official Facebook and BACPAR Official Twitter pages. Shares appropriate content, promotes posts on behalf of members and facilitates responses to questions and comments from members and the public
- Builds and maintains an appropriate social media network by moderating followers and following/ responding to other appropriate content/pages/ groups.
- Regularly promotes and adds appropriate content to encourage discussion and dissemination on the appropriate platform
- Acts as administrator and moderator for BACPAR Members Only Facebook group. Ensures, with assistance from other exec members, that only BACPAR members are members of the group
- Disseminates content to all members through the Members Only Facebook on behalf of members when required
- Champions the 'Amputee Rehabilitation' iCSP network and takes the lead in moderating BACPAR Members Only Facebook, encouraging discussion and dissemination of related topics
- Uploads and monitors content of the BACPAR YouTube channel. Supports members to upload and share content on the channel

Treasurer

This will be the end of Sue Lein's first 3-year term and we are very thankful that she is willing to continue in post so unless you have a burning desire to challenge her for this you don't need to read the blurb below!

- Keeps control of BACPAR finances by recording financial transactions. The basic transactions are receipts and payments
- Prepares the annual accounts and acts as a signatory for payments
- Ensures the annual accounts are audited and presented for approval at the AGM
- Supplies receipts for payment made to BACPAR nationally and provides invoices for Executive Committee led activities, e.g. journal advertising, conference and regional study days, Handicap International
- Liaises closely with Membership Secretary re membership fee payments
- You will be getting more info on how to make nominations prior to the AGM via email but if you want to speak to anyone about the roles please contact the current post holders – email addresses on the back page.

Julia Earle
BACPAR Chair

REGIONAL REPORTS

IRELAND REGIONAL

Carolyn Wilson
Bacpar.ireland@gmail.com

Like everywhere else in the UK, amputee rehabilitation has not been a big priority for the Health Service in the face of the COVID-19 crisis in Northern Ireland! However, staff who were not redeployed used the opportunity to avail of various webinars and online training. I have also provided in-service training to Band 4 and Band 5s and hope to provide some online training. Fortunately, the first wave of the virus was not as bad as might have been expected here and we were able to return to seeing some patients 'Face to Face' from mid-July. Our ward opened with very limited capacity in August and within the limitations of current restrictions, we are very busy.

Our waiting list for assessment of new Primary patients is now lengthy. Months of inactivity without input from community rehabilitation have resulted in patients with amputations becoming deconditioned, demotivated and 'chair shaped' with very significant joint contractures. This certainly presents a challenge for the multi-disciplinary team! Any feedback from limb centres in other regions would be very welcome so please feel free to email me regarding this issue.

WEST MIDLANDS REGIONAL

Louise Tisdale
bacpar.westmidlands@gmail.com

The West Midlands' membership finds themselves largely participating in a new normal, with the majority of members back into their usual roles.

Since the spring journal our meetings have been carried out on Zoom - thanks to the BACPAR Zoom account.

Our most recent meeting was on the 7th September; members joining us from both in and outpatient services across the region.

The meetings have been a useful means of catching up and sharing how services are managing the required changes as a result of COVID-19.

THE NEW SOUTH-WEST REGIONAL

Shaun Fryett
BACPAR.southwest@gmail.com

Due to COVID-19 we haven't really been able to do much or get the Region up and running as well as I would have liked. We have identified 13 members and are currently working on making this more accurate following the creation of the region although this has been slowed due to the outbreak of COVID-19. Do get in touch if we should know you!

COVID-19 has affected all plans so far this year and the Region has been unable to meet up. We are planning a virtual meet to discuss how our different areas are coping in the current phase of rehab with COVID-19 limiting much of what we do.

During the original outbreak many of our staff were redirected to working within different areas either within the acute sector or facilitating discharge from hospital in the community. Some community services remain quite affected however we are having success with patients coming through and having limbs fitted.

Our Limb Centre in Exeter is back up and running however capacity is limited due to some staff shielding and clinical space restrictions. We have moved into a new Limb centre which has significantly updated the facilities and the environment that we can offer patients.

Hopefully we can keep our Limb Centres open over the winter and into the new year with the threat of further COVID-19 peaks.

TRENT REGIONAL

Wendy Leonard
Bacpar.trent@gmail.com

Virtual meeting is the new norm but the technology requires a bit of adapting to - fortunately there are members who come to the rescue at very short notice. Thank you.

The main focus of the meetings we have held has been support for each other - all have had their services severely disrupted and some staff have been relocated away from their normal workplace. All are now back where we belong and beginning to re-establish services as much as able being inventive as to how this can happen.

Virtual meetings will continue and are time efficient but do lack the personal element that goes on at face to face meetings that I think we are all missing.

EAST ANGLIA

From Jess Withpetersen and Anna Cue

The East Anglia region is large geographically but small in therapist numbers which can make meeting up difficult.

We e will provide an interesting analysis of a large geographical area with a focus on the outcome measures that mean the most to the amputees themselves.

SOUTH THAMES REGIONAL

Hayley Freeman & Pip Joubert
Souththames.bacpar@gmail.com

What a crazy 6 months?
Unfortunately our planned study day "Amputee Exercise Progression and Peer Support" had to be cancelled in May due to COVID-19 but I am going to look into a virtual option so keep a lookout.

We also had a South Thames Zoom catch up in September which was led by Pip: seven members were able to log on (others unfortunately had technical difficulties) and found it useful to discuss and compare Service Updates, training ideas and ways in which we can support you all. It was suggested these will become a regular 3-6 monthly event but may be organised by Prosthetic Centres and/or similar work environments. It would be lovely to see (virtually) more of you there.

I know this time has been difficult for everyone, one way or another, so I just wanted to say we are here if you want to just check in, have some peer support/reflection or just a catch up on what is happening in our area, please don't hesitate to get in touch.

If you have any questions about study days, zoom catch ups or for any peer support, please email us at souththames.bacpar@gmail.com.

SOUTH CENTRAL REGIONAL

Tim Randell
Tim.randell@rbch.nhs.uk

Obviously due to the circumstances enforced upon us by COVID-19 there has not been much activity happening in the region. Many of our members have proven their resilience and flexibility by stepping up and helping out in more unfamiliar roles during this difficult time. As systems get back to the new normal we will hold another regional meeting but this time via a digital platform, now we are so accustomed to them!

INFORMATION TO SUPPORT THE LAUNCH OF UPDATE GUIDELINES:

'EVIDENCE BASED CLINICAL GUIDELINES FOR THE MANAGEMENT OF ADULTS WITH LOWER LIMB PROSTHESES' ED. 3. 2020

Background

The need to drive up clinical standards and the quality of clinical services so that meaningful improvements for the patient are seen, whilst maintaining cost effectiveness, are continuing central themes found in all recent government publications pertaining to the NHS [1,2]. Therapists need to demonstrate they provide clinically effective interventions and ongoing commitment to CPD in order to maintain state registration [3,4].

Clinicians working within amputee rehabilitation have reported using the second edition of the guidelines [5] in many ways [6]:

- A tool to guide best recognised clinical practice e.g. supports discharge planning and progression
- To aid identification of personal and team learning needs specific to physiotherapy treatment of adults with lower limb prostheses
- Helpful to review services provided and ensure standardisation e.g. the use of outcome measures
- Provides evidence to justify service delivery
- Enables benchmarking local services against national, evidence-based recommendations and use findings as drivers in the development of local service provision and local protocols
- Supports making a 'checklist' document to use for patient notes
- Supports medico-legal work as amputee expert
- Supports rotational staff/new starters/student placements
- Potential for greater use in outlying departments who feed into limb centre

As a matter of routine practice, BACPAR has updated these guidelines to support and facilitate the on-going hard work of its membership aiming to achieve best clinical outcomes and secure the optimal local service provision for persons who have undergone lower limb amputation.

Key changes in the guideline update

- New literature reviewed and incorporated into the recommendations; where indicated new recommendations have been made
- Recommendations created by expert opinion in previous editions were revisited using the Delphi Consensus tool to ensure that practice points were still valid to reflect what is considered 'best practice'
- The review, update and addition of 'Good practice points' (GPPs)
- Enhancement of the audit and implementation tool document to
  - To further assist clinicians and managers evaluate service provision and their own learning needs
  - To support future continuing professional development (CPD) activity which encourages the promotion and use of all guidelines
- A change to section 6 heading to remove "Long Term Needs" and include "Participation", as a result of updated research in this topic
- The update of the *Information for the public about physiotherapy following amputation of a lower limb* (originally created for the 2016 pre and post-operative guidelines), and an accompanying poster for display to signpost patients to this information

In the past CSP and BACPAR representatives have expressed concern that the length and depth of information included within the main document could potentially detract from its accessibility and usability for clinicians. To address this concern the Guideline Update Group has created three separate documents:

1. Process document detailing the full methodology of the guidelines update.
2. Recommendations document summarising the evidence-based recommendations.
3. Audit and implementation guide – includes updated audit tools, CPD suggestions and examples of implementation and changes to practice (as a result of audit)

Taking the guidelines forward

The authors and BACPAR executive recognise the essential work that goes on at regional level supporting clinicians. These guidelines and recommendations are not mandatory and BACPAR recognises that local resources, clinician enthusiasm and effort, as well as the rehabilitation environment in which the practitioner works, will influence their implementation.

Please refer to the Audit and Implementation guide to assist individual members and/ or departments with the process of evaluating current practice, identifying areas for improving practice through building on good practice and professional development. Suggestions made for CPD activities (see table in audit guide) stem from responses by BACPAR members when help has been requested to participate in projects linked to guidelines. Many members report feeling 'underequipped' and daunted by the guidelines and associated processes, for example undergoing audit. We believe it is essential that skills are developed within the membership to enhance the implementation of guidelines and in appreciating the relevance of literature review that contributes to their ongoing development and best practice.

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6. Consensus opinion gained by the Delphi process for the 2020 update: Humpherson et al. (2020). *Evidence based clinical guidelines for the management of adults with lower limb prostheses. Ed 3.*
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THE WESTMARC KNEE GUIDE: BOTH THE BANE AND SAVIOUR OF MY WORKING DAYS!

By Nikki Porteous
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I waddled off onto maternity leave in March 2018; with the smug satisfaction that we had finally completed the "WestMARC Knee Guide for the Prosthetic Multidisciplinary Team 2017" which can be found at http://www.knowledge.scot.nhs.uk/westmarckneeguide.aspx and that it would be a distant memory until the review in 2022. After months, or should I say years of hard work, meetings and editing we had something that I felt was a very useful tool for clinicians. Despite having written a large chapter, I did not realise quite how beneficial I would find it until I returned a year later with "baby brain" and found I was using the document on a regular basis, especially, for the first couple of months of my return. It was so helpful to have such a large volume of information condensed down into useful chapters and be able to look at the quick guides for a comparison on what knee might work better with someone.

I often use the chapter on "Gait Training and Prosthetic Knee Issues" when teaching gait training to my students and new rotational staff members. I find that the overview of normal gait with the common prosthetic issues documented below is laid out clearly and is helpful for staff and students to clinically reason the findings from their practice. They often can breakdown the gait cycle easier and work towards changing our patients' walking pattern with a good understanding of why certain faults may be happening along with what muscle groups are affected.

I also find I am in a rather strange position where I have a more experience working with patients that have been provided with a microprocessor knees (MPK) rather than specific mechanical knees and therefore, I regularly have to refer back to the guide to decipher if a gait fault can be a limitation of their current knee or if it is something I can nag them over from a physiotherapy perspective – like improving gluteal strength! I recently used the knee guide when a patient was changing from a polycentric knee onto an MPK. There were several common gait faults which had stemmed from the patient having some falls with the limb and losing trust in his current prescription. The patient was

slamming down his heel at initial contact to ensure the knee was fully straight and then struggling to achieve full foot progression and allow the knee to flex at swing. The knee guide allowed me a better understanding of why the patient had altered his gait in this manner and it helped me to fully understand the mechanism of how the knee worked; this then guided my treatment into aspects I felt I could or could not change. Additionally, I could also discuss with the patient the implications of changing onto a new knee, what to expect, how it would work differently from his current prescription and which of the MPKs might work best for his activities of daily living.

I was recently treating a 14-year-old girl who was very active and definitely challenged the boundaries of the MPK! Some of her queries were unable to be answered by the knee guide unfortunately, such as: “why was my knee buzzing and going crazy when I was on the bottom of a human pyramid at school?” – not something I often hear from my usual client group, along with “it does something strange when I try and do a burpee with it”! So, between the prosthetist and myself, we managed to reason out why the knee was behaving in this manner but it is these challenges that have us striving for new knowledge and continually advancing our practise. Additionally, there was some very helpful information such as various ideas for teaching the patient how to go up the stairs step-over-step. This was useful because, from my experience, each patient finds a different method easier to learn so it is nice to have different options laid out to try along with the teaching videos that you can show them.

Due to this constantly evolving field of physiotherapy we have decided to review the knee guide earlier than planned so the information is as up to date as possible. We are hoping to make it more interactive with extra teaching videos, links to the companies and updating the hints and tips section to help therapists troubleshoot with their patients. So, despite the endless meetings for this document I feel it has saved me crucial time during clinics so that I can easily access meaningful information that I can use and disseminate to my patients. I hope we can continue to expand and develop it to keep up with the service demands. The team are very open to receiving feedback, additional hints or tips or any further information people would like included in the guide so please contact me on ntaylor7@nhs.net at any time.

A Survey of the Lower Limb Amputee Population in Scotland 2017 Full Report

SPARG
Scottish Physiotherapy Amputee Research Group

June 2020

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SPARG 2017 Annual Report: Executive Summary

National data: key points

- People are undergoing lower limb amputation earlier in life. Since SPARG began reporting in 1999 the median age has decreased from 71 to 66.
- More than half of all patients in 2017 have an amputation associated with diabetes.
- The median age of new amputees with diabetes is now 7 years less than those with peripheral arterial disease (PAD) without diabetes.
- The use of rigid post-operative dressings (POP) for below knee amputees, which has been shown to improve outcomes, is the lowest it has been since 2012 (14.8%).
- People with bilateral below knee amputations report significantly better mobility outcomes than unilateral above knee amputees.

Individual Hospital data

Each hospital's model of care (MOC) varies and the impact this has on the achievement of rehabilitation milestones and outcomes is complex and influenced by many factors including patient demographics (see Table 1). Hebenton et al 2019 identified key aspects of services that appear to improve speed and outcomes of rehabilitation after lower limb amputation[1]. These key aspects have been used to develop the weighted MOC scoring system used in this report.

Table 1 **Factors influencing rehabilitation milestones and outcomes**

Influencing factors	AH	DGRI	FVRH	GRI	HH	QEUH	NH	RH	RIE/AA	VH	National median
Total moc score (max score = 11)	7	6	6	2	6	8	10	9	7	11	**6.9**
Median age	69	68	64	52	66	63	68.5	73	66	62	**66**
Median FCI (max score = 18)	3.6	2.5	3.6	1	3.1	3.2	2.9	2.9	2.9	2.8	**3.1**

Table 2 **Rehabilitation milestones and outcomes for unilateral TTA**

Milestones and outcomes for unilateral TTA	AH N=19	DGRI N=4	FVRH N=10	GRI^ N=5	HH N=29	QEUH N=43	NH*° N=20	RH*° N=11	RIE/ AA° N=18	VH*° N=11	National median
Days to LF	72	51.5	53	38	74	37	43.5	36	63	44	**51**
%LF	64	50	48	100	81	68	79	69	46	92	**66**
LCI5 change score	-8	4.5	-11.5	9	-9	0	-9	-13	-11	0	**-8**

KEY: -
Red = less positive compared to national median, AMBER = similar to national median, GREEN = more positive compared to national median.
FCI = Functional Co-morbidities Index. MOC = model of care,
MOC indicators: Immediate post-operative rigid dressing, Specialist physiotherapy in first 14 days, Daily inpatient gym session, Inpatient gym session ≥ 1 hour, Prosthetic centre on site as inpatient, Prosthetic provision as an inpatient, Specialist physiotherapy outpatient service. LF = limb fitting i.e. being fitted with a prosthesis and starting walking training,
LCI5 = Locomotor Capabilities Index 5 change score, difference between score 6 months before amputation and at the end of rehabilitation. *= rigid dressing used, °= limb fitted as inpatient, ^ note GRI has no vascular surgery.

Benchmarking points from analysis of unilateral TTA milestones and outcomes: -

Delayed use of compression therapy and walking with an early walking aid is linked to delays in fitting with a prosthetic limb (10.5 weeks vs 5 weeks) e.g. slower services AA/ERI and AH.

Discharge from hospital prior to casting for prosthetic limb in centres with older patients with more co-morbidities delays prosthetic fitting e.g. slower services AH, HH

All 3 centres who regularly use a rigid immediate postoperative dressing POP (faster services NH, RH and VH) are limb fitted significantly more quickly than national median.

Timeous application of compression therapy and EWAs by specialist physiotherapists on a daily basis, casting before hospital discharge followed by routine, specialist outpatient rehabilitation at the Limb Fitting Centre is linked with earlier fitting with a prosthetic limb and a good mobility outcome even with a cohort of older patients with vascular disease who are not fitted with POP e.g. QEUH.

Intensive inpatient prosthetic rehabilitation can achieve the fastest rehabilitation times as long as physiotherapy is led by onsite specialists beginning from day 1 post surgery on a daily basis e.g. faster services NH, RH and VH.

Recommendations: -

Older patients with PAD +/- diabetes should be fitted with a POP, have daily, specialist physiotherapy beginning compression therapy and walking with an early walking aid promptly as recommended in current guidelines[2] and be cast for their prosthesis prior to discharge from hospital. Intensive inpatient prosthetic rehabilitation can achieve the fastest rehabilitation times as long as physiotherapy is led by onsite specialists from day 1 post-surgery and carried out on a daily basis. Patients should then have specialist outpatient physiotherapy with access to full multidisciplinary team. Proximity to the limb fitting centre is a benefit both as an inpatient and outpatient.

The health economics of replacing POP technique with removable rigid dressings warrants investigation given the decline in POP use nationally.

The impact of the type and length of ongoing rehabilitation following discharge from hospital should be considered by all boards.

The full report can be accessed from the SPARG website (SPARG website: http://www.knowledge.scot.nhs.uk/sparg.asp

Ref:

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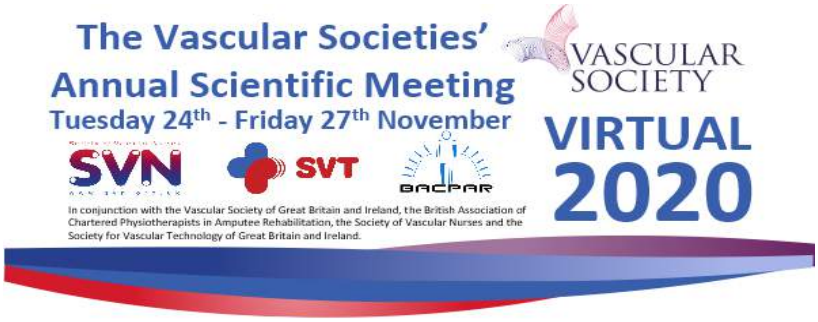

Join us for BACPAR's first ever virtual conference!

Also, for the first time, BACPAR 2020 will be part of the
Vascular Societies Annual Scientific Meeting.
This means BACPAR delegates get access to all content from the VS, SVN and SVT programmes!

BACPAR programme – more TBC!

Tuesday

Evidence based Clinical Guidelines for the Physiotherapy Management of Adults with Lower Limb Prosthesis Update
Report on Major Lower Limb Amputations Due to Vascular Disease: A Multidisciplinary Approach to Surgery and Rehabilitation
10 years of Surveying the Lower Limb Amputee Population in Scotland SPARG
Through-knee versus above-knee: rehab outcomes and experiences of the MDT

Wednesday

Use it, then lose it. Rehabilitation of staged amputations in a quadrilateral amputee with symmetrical peripheral gangrene.
BLART predicting mobility Post Amputation
Does a low score on the Montreal Cognitive Assessment (MOCA) correlate with prosthetic mobility outcomes for patients undergoing intensive inpatient amputee rehabilitation
Abstracts

Thursday

Impact of MPK Prescription on Physical Activity
The Impact of Hydraulic Foot and Ankle Provision on K3 and K4 activity users
A randomised feasibility study of a self-aligning prosthesis for older patients with vascular-related transtibial amputations: The STEPFORWARD study
People Powered Prosthetics
Was it me or the MDT?

Programme times

VS ASM Registration Prices Prices will increase by 20% from 17th November 2020	
Consultant / Doctor	£100
Medics / Trainee	£75
Nurse / Vascular Scientist / Allied Health Professionals / Student	£25
Industry Personnel	£200

Thursday Evening Symposium

All delegates are invited to the SVN symposium with guest speaker David Nott 7-8pm. Virtual drinks reception 6.30-7pm. Purchase a drink of your choice through smile.amazon.co.uk to donate money to the Circulation Foundation.

Go to vascularsociety.org.uk or search "VSASM 2020" to register and see the full programme

REFLECTIONS FROM ISPO KOBE, JAPAN 2019

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With global travel so unlikely at this time it is a good opportunity to reflect on times away and think about the ones ahead. Thanks to a bursary from BACPAR, attending ISPO in Kobe, Japan last year was the trip of a lifetime. Not only was I able to go to the International World Congress in the field of amputee rehab and prosthetics but also to visit a country so different to ours and experience the culture and history.

The opportunity of going to ISPO in Japan was not to be missed, so the plans were set in motion early 2019, with a free paper and instructional course submission to the reviewers, which were both accepted. Attending any international conference is an excellent opportunity but being able to present your own work and represent BACPAR allows you to raise the profile of physiotherapy in amputee Rehabilitation and, in my mind, also opens doors to more networking opportunities.

The journey to Japan from Glasgow is a long one, but arriving at the airport in Tokyo, the silence was deafening! For a country that is the 11th most populated in the world, the people are quiet, don't raise their voice and don't talk on their mobile phones when in public places. I immediately felt that I was in a foreign land, and one that I liked! The first night in Japan we stayed in Tokyo to get acclimatised and of course went to visit the famous lights in Akihabara, Tokyo's plaza for electronic goods.

Next day it was off to Kobe on the Shikansen (bullet train), an experience not to be forgotten, not only is it the most meticulously organised train system but the comfort and speed of 150-200mph is in stark contrast to Scotrail! Once in Kobe it was off to register for the conference which was in a complex of large auditoriums and conference halls. As expected, it was extremely well organised and I immediately met up with my BACPAR friends. The first session of the conference was one on Outcome measurements/ Quality of Life/Psychosocial Issues. Dr David Boone, from Washington, USA, presented data on the financial value of gaining mobility rather than the standard Quality of Life Years (QALY) that we tend to consider. This was an interesting session and gave me food for thought when considering the financial gain of providing MPKs in our service.

The following day was an early start to listen to my colleagues present in the session "Prosthetics-Lower Limb Transfemoral Knee. Dr Bruce Carse presented the "Improvement in gait outcomes following MPK provision" an interesting review of gait profile score and the differences observed in energy expenditure, oxygen costs and symmetry of walking after MPK use. This was followed by another excellent presentation from Laura Ritchie, "Differences in K2 task completion with and without MPK and hydraulic ankle technology". Observing this session makes you appreciate just how important the contribution from our clinicians in the UK is, and continuously raises our profile.

The afternoon free paper session of "Scientific explorations regarding Osseointegration to inform clinical practice and support consumer decision making" was well attended with global leaders in this field and made for a lively debate between them. This was a worthwhile session to hear of the different protocols and data gathering strategies between different countries that perform OI; especially as in Scotland we have started OI in a small group of patients.

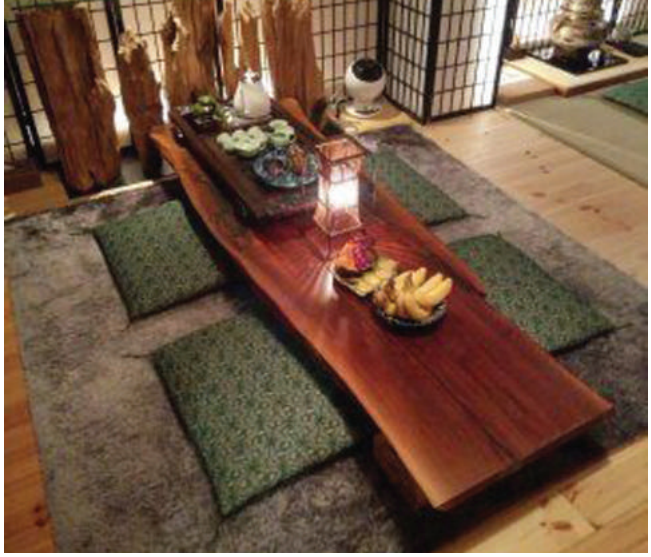
The end of the second day was the conference party which was a great opportunity to socialise with my BACPAR friends and be entertained with Japanese performances, all with some Sapporo beer.

The third day was my time to jointly chair a session on "Psychosocial issues/Quality of Life & Community Participation". Chairing a session gives you a front row seat to being able to talk to the international

presenters, an opportunity which I would strongly recommend. Later on that day I was presenting "The views and experiences of how peoples QoL has been influenced after LEA", this was part of my PhD and was well received by the audience. There was also an appreciation that an LEA for vascular disease was not always going to result in walking with a prosthesis and as such was in stark contrast to the state of the art technologies highlighted in the conference halls. The night ended with an experience of a lifetime where we ate at a famous Kobe Beef steakhouse, where the beef literally melts in your mouth!

Last day of the conference, myself and my colleague Dr Bruce Carse were presenting our Instructional Course presentation "The experience of providing low activity transfemoral prosthetic users with MPKs: Who benefits?" The instructional courses are 75 minutes long and you not only present your data but chair the presentation and host the Q&A session at the end. This is an excellent chance to present case studies, videos and have a more informal dialogue with the audience.

Throughout the conference there is always time to stop and talk to colleagues from across the globe and I especially love this part of any conference when you have the chance to meet people face to face after reading their papers and hearing about their work. You can't undervalue the networking opportunities of



conferences and the conversations and collaborative working that comes from them.

Presenting can be a bit nerve wracking and you have to put a lot of work in prior to the conference, but it is a brilliant chance to disseminate your work and raise the BACPAR profile!

I was fortunate to be in Japan for another two weeks after the conference and of course put this to excellent use by visiting as many places in this beautiful country as possible, while of course supporting Scotland playing rugby against Samoa, Russia and of course Japan! Despite not seeing Scotland qualify, this trip was once in a lifetime and to be able to combine work and travel is one that I would strongly recommend to all!!

OFFERING CPD AND MSC OPPORTUNITIES IN AMPUTATION AND PROSTHETIC REHABILITATION: HOW ARE WE DOING?

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Chantel Ostler
Highly Specialist Physiotherapist, Prosthetic Rehabilitation, Portsmouth Enablement Centre, UK

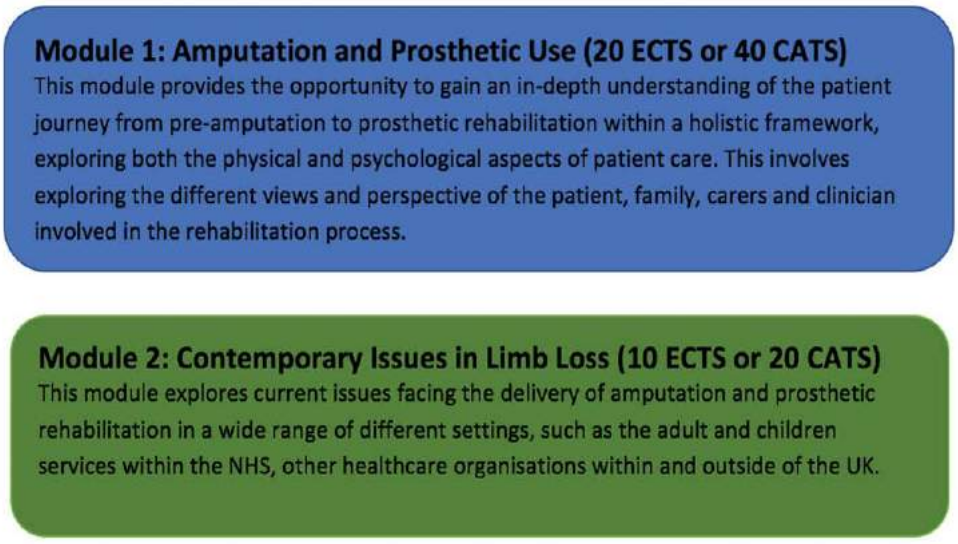
Background

Many of you will already be aware of how passionate the BACPAR Executive Committee, and wider membership, have been in promoting the development of 'Continual Professional Development' (CPD) opportunities; especially the education component and this responsibility of the professional network. Not only is this shown in the hard work that goes into the organisation of annual study days, but also fostering strong working relationships with 'Higher Education Institutions' (HEIs) to develop and provide CPD provision. It was quite some time ago that the University of Bradford hosted and delivered the first Post Graduate Certificate in Amputee Rehabilitation and we saw the successful completion of three cohorts who were fundamental in developing evidence-based guidelines and guidance for best practice that is part of a long-standing legacy. As the University of Bradford was unable to continue hosting the course, BACPAR consulted the membership via a survey which confirmed a strong desire to continue with this level of professional development. Following a series of advertising to all HEIs in the UK and a period of consultation and evaluation, the University of Southampton was selected to deliver a range of new and exciting learning opportunities. The first MSc Amputation Rehabilitation pathway started in October 2016 and continues as a full MSc programme led and delivered by Maggie Donovan-Hall and Cheryl Metcalf within the School of Health Sciences, working closely with Chantel Ostler who is a 'Highly Specialist Physiotherapist and Clinical Academic' in prosthetic rehabilitation. As we begin to prepare for the fifth year of delivery, this article provides an outline of the current provision offered, a reflection of how the last four years have gone, and some thoughts for the future.

Outline of the CPD and MSc structure offered at the University of Southampton

Since initiating the development of these opportunities, we have recognised how difficult it can be for a busy clinician to engage in any level of CPD. We developed a range of opportunities from the completion of single standalone specialist modules to an 'MSc in Amputation and Prosthetic Rehabilitation'.

Figure 1: Specialist Amputation Modules:



Specialist Amputation Modules

Working with BACPAR, we developed two specific amputation modules that provide current and specialist knowledge. In order to meet the needs of as many students as possible, these modules are delivered in four-day teaching blocks running

from Thursday to Sunday (i.e. module 1 has two teaching blocks and module 2 has one teaching block, see Figure 1). This seems to work well in terms of making it easier for students to negotiate study days, for those needing to use some limited annual leave, or for those that live any distance from Southampton.

Flexible modular structure

The development of a flexible modular structure means that we can offer four exit points for studying (see Figure 2). Students who wish to complete the entire MSc can do this normally between twelve to eighteen months of full-time study, or two to five years of part-time study. The optional modules can be tailored to the student's own developmental needs and can be selected from other programmes within the School of Health Sciences, such as the MSc in Leadership & Management, or other disciplines, such as the MSc Diabetes from the Faculty of Medicine. We work with students to try and create a bespoke programme that suits them.

Reflections on the last four years

Although this is a specialist area of education and targeted to a specialist group, we have received growing interest in the programme and a growing number of students, both in the UK and internationally. Here we reflect on key aspects relating to our student numbers and areas of growth, our multidisciplinary approach and teaching ethos.

Programme growth

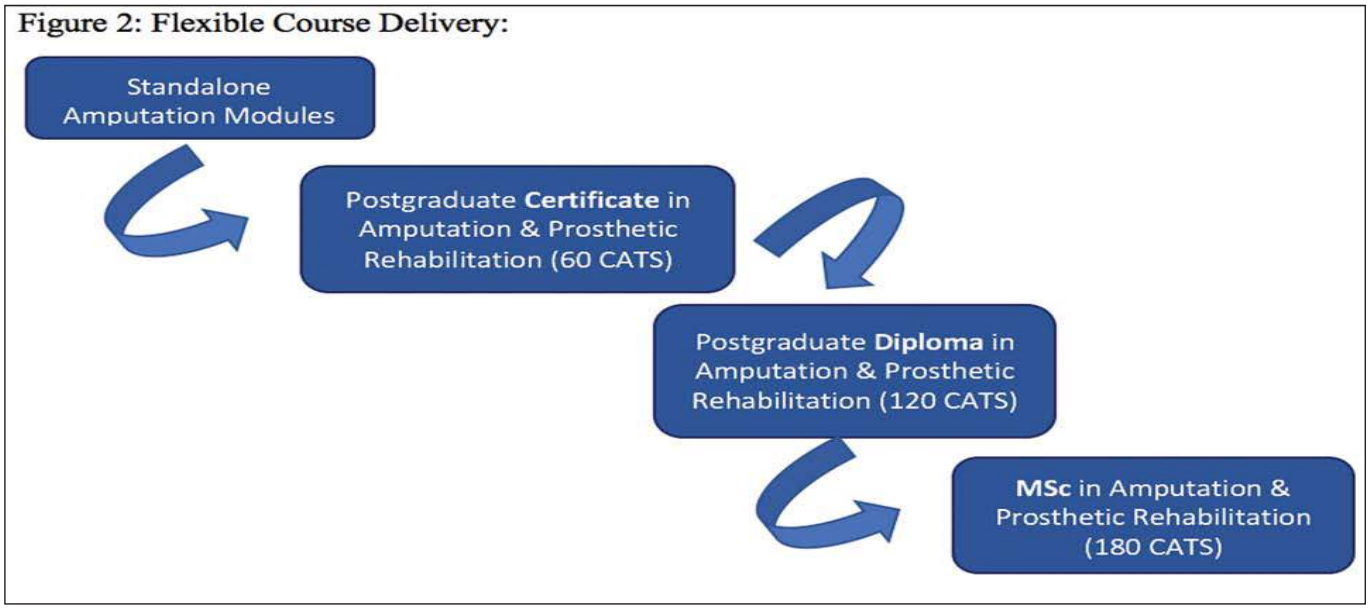
Overall, we have been pleased with the growth of these CPD opportunities in terms of student numbers and sustainability. To date, we have had 11 students graduate from the MSc Programme and currently have 22 students on various stages of the part- and full-time programmes. In addition to this, we have also had another 15 students completing the standalone amputation modules. It has been fantastic to see a growing trend in the number of students who start by studying a standalone module and then decide to continue with their studies to gain a higher exit award, which is commonly the full MSc. We have also seen a growth in our international students from countries such as Singapore, China, Pakistan and Saudi Arabia. This is fantastic and, in addition to raising the international profile of the programme, provides a valuable learning opportunity to all the students. Midhat Adnan who is a physiotherapist from Pakistan and part of our current cohort said "Southampton has an outstanding ranking and is renowned for its health sciences courses. It is also the only UK university to offer a distinct master's in amputation and prosthetic rehabilitation designed for multiple health professionals. During my MSc I met professionals from diverse healthcare systems, gained valuable experiences, and learnt a lot from my fellow peers, prestigious speakers and lecturers. This all helped me grow as a person and a professional"

(see https://www.southampton.ac.uk/healthsciences/postgraduate/our_students/midhat-adnan.page)

The importance of a multidisciplinary approach

In addition to suiting the needs of physiotherapists, due to the holistic nature of rehabilitation following amputation, the modules and programme were designed to take a multidisciplinary approach and be suitable for all healthcare professionals. We are therefore pleased to see such a wide range of different backgrounds including, occupational therapists, prosthetists, podiatrists, individuals with exercise and personal training backgrounds, case

Figure 2: Flexible Course Delivery:



managers and engineers. It is also good to see that the modules and programme are attracting both clinicians who are experienced in prosthetic rehabilitation or those who would like to move into the area at both the UK and international level. We have seen how this can deepen the student's experience through peer learning and gaining a wide variety of rich, multidisciplinary perspectives, and different levels of clinical knowledge from different global healthcare contexts.

The provision of specialist and evidenced-based knowledge

In order to ensure that teaching is evidence-based and current, we have embraced a research-led teaching approach that is delivered by multidisciplinary researchers, educators and clinicians across faculties within the University. This is aligned to the growing body of research and expertise across the university in this field and in areas such as skin health and technologies, biomechanics, diabetes, psychosocial issues related to limb loss in both adults and children, the development of prosthetics components and work within prosthetic rehabilitation in countries with a developing economy. In addition to internal links, we have a growing number of external partners that are a valuable part of the delivery of the modules and programme. This includes professors from other HEIs, industrial partners in the field of prosthetics and clinical collaborators from a range of different settings. We are also very lucky to have fantastic support from our growing 'public patient involvement' (PPI) group who bring the 'patient voice' to the programme and emphasise our 'patient-centred' approach.

Challenges and opportunities for the future

As with all educational provision, it is important to continue to take a reflective approach and make required changes and plans. This has been particularly important during the COVID-19 pandemic and the need to make changes to the programme delivery.

Programme changes related to COVID-19

There is no doubt that the COVID-19 pandemic has been a difficult time for all of us and led to lots of changes in our practice. As with many other educational programmes, we had to quickly transition from teaching our modules face-to-face to online and getting to grips with a new way of working. Since March, we have worked hard to support students remotely in terms of delivering educational content online, remote research supervision as well as continuous pastoral online support. Working alongside the central University, we also decided to postpone the start of the 2020/2021 academic year and move the start date from October 2020 to February 2021 to provide all students with further flexibility. This means that the amputation module teaching blocks will now run in February, March and May 2021. The current plan is to run these modules using a 'blended' approach (i.e. part online and face-to-face teaching) and we are in the process of developing a range of new online resources, however we will re-evaluate this and be able to move to remote learning if necessary. Despite these uncertain times, we remain committed to providing high quality education and we will work hard to support our students. This may also be a valuable starting point to be able to provide further online teaching opportunities within the scope of amputation rehabilitation, and feedback from BACPAR members about this option would be very welcome.

Becoming a 'flagship programme'

In order to further support our evidence-based teaching and offer our students real experience of academic research during their programme, we are planning to become the 'flagship' education programme for the 'People Powered Prosthetics' (P3) research group. The research group is led by Cheryl Metcalf and is 'is a global group of researchers, clinicians, prosthetic wearers, academics and engineers who are committed to using research to improve the lives, limbs and rehabilitation of anyone affected by limb loss' (https://peoplepoweredprosthetics.com/). The group links closely with the education programme, identifying or supporting ideas for dissertation projects, providing opportunities for clinical observation and linking individuals throughout the network for future collaboration. This collaboration will provide students with the opportunity to become associate members of the multidisciplinary P3 research group, which can support them throughout their future clinical and research careers.

How to find out more about modules and programme

We would be delighted to hear any of your views about these CPD opportunities or do get in touch if you are interested in hearing more about the modules and programme.

Programme Website

https://www.southampton.ac.uk/courses/amputation-and-prosthetic-rehabilitation-masters-msc

Programme Lead

Dr Maggie Donovan-Hall, School of Health Sciences, University of Southampton

RETIREMENT – A REFLECTION

Lynn Hirst
Physiotherapy working career July 1997 to June 2020

My career as an amputee rehabilitation physiotherapist started a little later in life than most. I qualified as a physiotherapist aged 38 in 1997, but my interest in limb loss rehabilitation started around 4 years earlier. While studying for an access course I had arranged a shadowing day with various physiotherapy disciplines at Calderdale Hospital Halifax. I don't remember much about most of the day but when I meet Bev Sweeney, who was overseeing the amputee rehabilitation group, I was smitten. The importance of the education, pre limb fitting exercises, stretches and the gait re-eduction for diabetic and PAD patient made me feel I could make a real difference in this area.

At the West Yorkshire Physiotherapy College at Pinderfields I engaged in any vascular or amputee modules and often my course work include examples of amputee exercises and rehabilitation. My vascular student placement was in Middlesbrough, with Jane Cummings, who I am sure many of you will remember. This was a difficult placement, I travelled daily from the Huddersfield area as I was too home sick to leave my three children and husband all week. Jane gave me the worst placement marks of any of my student placements, which was a real shock. However I just worked harder and Jane and I have had a laugh about it later in my career.

After qualifying, my first job was at Huddersfield Royal infirmary, where it became known that if anyone wanted any help or advice with in-patient amputee rehabilitation to get in touch with me. I would contact the then guru for amputee rehabilitation, Sandra Lickless working at St Luke's amputee out-patients, for advice (always know your limits). Unfortunately for me, vascular and amputee rehabilitation was placed in the respiratory team, and respiratory was an area of physiotherapy I disliked intensely. After completing all my rotations I become a Senior 2 (as it was graded then) in RESPIRATORY to ensure access to the vascular ward. Later I applied to Dewsbury Hospital for split working on vascular in-patient and out-patient and respiratory. I did try to negotiate a split with out-patient amputees and neuro rehabilitation, but they weren't as flexible back then.

After around 18 months Robert Shepherd (known as Shep) resigned as the Senior 1 physiotherapist at the regional amputee centre at Leeds (thank you Shep). Brenda Saville who was Shep's Physiotherapy assistant, who many of you will remember (she actually ran the show), encouraged me to apply for the job. I spoke to my husband as this was my

dream job, but felt I would not have the experience necessary. He encouraged to have a go and if I didn't get the job just put it down to experience. I was interviewed by among others Sue Pearce (a previous chair person for BACPAR) and got the job. Yes, I may not have had the experience but they said that my over whelming enthusiasm to support patient with limb loss through their rehabilitation shone through.

One of my first patients was a three year old quadruple amputee (due to meningitis), this was a steep learning curve. Luckily I had a very experience set of clinicians working with me, but it was still a challenge. Only recently she returned to us to achieve walking with two C-leg 4 microprocessor knees, fantastic to see. She is now a You tuber posting videos on applying make-up, none of this learnt from me.

I was one of the first to appreciate the benefits of the Nintendo Wii balance board for amputees. I did an interview and demonstration on News round. This caught the interest of Nintendo, who gifted us a Wii console and balance board, great. This also went viral and I ended up being trolled for experimenting on poor amputees, not so great.

For the last 18 years I have felt privileged, and honoured, to be the lead physiotherapist for the specialised amputee service at Leeds. All the regional amputee specialist physiotherapists, many

more experienced than myself, have fully supported and assisted me throughout this time.

BACPAR has always been important to me and most of the academic learning has been through the conferences, peer support and my post graduate qualification from Bradford university in 2007. I have supported the committee by being Regional representative for 15 years, did my time as Secretary and organised the conference Programme for the 2015 Wolverhampton National Conference. Unfortunately work pressures in the latter years prevented me from increasing my involvement with the committee but the new members of the team are very impressive, highly skilled individuals with lots of talent.

The final bit of my career happened quite unexpectedly in 2019. I was approached to be part of a small team from Leeds Trust under the guidance of Anne Chamberlain Professor of Rehabilitation Medcine, to go out to Madagascar and offer amputee rehabilitation training to Doctors, Prosthetists and Physiotherapists. This whole experience made me re-evaluate all my learning and experience in amputee rehabilitation. It was difficult to imagine what I could offer this third world country with limited resources. On reflection we all learned a lot. The team delivered a 4-day course, with the objective of encouraging MDT working rehabilitation for all amputees attending their centres. Everyone on the course attended all sessions, on medical, prosthetics and physiotherapy assessments and treatments and how these were interrelated to improve the outcomes for their patients. See accompanying photographs. I can truly say it was a very humbling experience, to meet fellow clinicians at the other side of world, working hard with very limited resources to improve the lives of many amputees.

My final word is to thank all my colleagues who have supported me and made this truly wonderful working career possible.

REFLECTIONS OF AN ANCIENT AND RETIRING PHYSIOTHERAPIST

Helen Scott
Team Leader Physiotherapist Westmarc, Glasgow

On the request of Mary Jane Cole I am sitting here at the computer to write about my 42 years working in the field of amputee rehabilitation and feeling very self-indulgent. So please forgive me, it seemed a good idea 3 months ago!

As a child my plan was always to be a nurse or teacher (photo 1) but I ended up studying physiotherapy because my best friend applied and I really didn't know what else to do (photo 2). In retrospect, I can see that for me, physiotherapy was the perfect combination of teaching and doing something medical. Once I started, amputee rehabilitation chose me rather than the other way around and I have absolutely loved it.

I first applied a PPAM aid in 1979 when working as a student on placement in Aberdeen Royal Infirmary Vascular Unit and my final year project was on amputee rehabilitation. I then proceeded to work with amputees at some point in all my jobs. First when a basic grade in Charing Cross Hospital, London, then as

a static Senior II on the Vascular Unit at Glasgow Royal Infirmary, a Senior 1 on the Vascular Unit and onsite Strathclyde University Prosthetic Clinic at Southern General Hospital and finally, in Westmarc still at Southern General Hospital but now called Queen Elizabeth University Hospital. The fact that I have been cycling through the Clyde Tunnel to get to work since 1987 causes great hilarity amongst my younger colleagues who like to whiz past me in their lycra!

What have I learnt over all these years? Forget evidence based (please don't!), these are Helen Scott's recommendations: -

The PPAM aid works and SPARG data backs this up. It needs to be used promptly after surgery even with delayed healing as long as use is over seen by an expert physio confident in wound assessment working as part

of an MDT. It is not so much about length of treatment sessions as timing, frequency and progression.

Rigid dressings control swelling and protect wound while it heals. All new trans-tibial amputees should be fitted with one!

Exercise therapy is crucial but needs to be targeted, progressive and include body awareness and core stability work (see photo 3). I learnt a huge amount from Christine Divers when she first started using core stability training with amputees in late 90s and to her I am forever grateful.

Fundamental equipment for gait training: long parallel bars, lines, mirrors, video equipment and space! The use of the line was a wee tip from the famous Bob Gailey. Thanks to him for this and many other gait, exercise and running training tips.

We must target our efforts where they can be most beneficial. Thank goodness we now have prediction tools to help guide us with those less able and higher level amputees. Check out Westmarc's protocols for unilateral and bilateral transfemoral amputees.

Amputation of a limb can be devastating. Psychological recovery must always be considered and fostering peer support and education through use of Support Groups, maintaining strong links with 3rd sector and having access to a clinical psychologist is crucial. I was blessed to work with a social worker called Rose Thomson and together with an OT, Patty Hepburn (photo 4) we started the first inpatient amputee support group in Scotland. We presented our findings at ISPO UK 1988 and won the prize for best presentation. We were so proud and I had a total ball at my first ever ISPO UK conference. We have always run support groups since then in one form or another.

Team work makes the dream work! One of the best parts of my job in recent years has been being part of WestMARC's dynamic and changing service that is at the forefront of new technology, in a multidisciplinary team (MDT) that is motivated, cohesive, sometimes challenging but always funny and supportive. I have loved that.

Every prosthetic service should have a gait lab (GL) or access to one. I have learnt so much working with our GL MDT including bioengineer Bruce Carse and prosthetist Alison Morton.

Kids should be reviewed by a prosthetic physiotherapist regularly and have a multidisciplinary gait lab review every 2 years. A little intervention at regular intervals makes a big impact. Prosthetic services should run activity events to get kids and their siblings involved together and give parents an opportunity to meet.

Hydraulic prosthetic feet change trans-tibial amputees' ability to walk outside. Microprocessor knees stop transfemoral and higher level amputees falling and are much more satisfying and less stressful to train people on. These devices do not suit everyone! I was very proud to be one of the authors of the Westmarc Guide to Prosthetic Knee joints (http://www.knowledge.scot.nhs.uk/westmarckneeguide.aspx)

Measure your outcomes! This will get easier with computerisation of tests, more computer adaptive testing and integration of outcome measurement into patient management data bases/electronic records.

Graded motor imagery including mirror therapy works to treat phantom limb pain. Check out Westmarc's pain algorithms and our treatment protocols.

My COVID-19 learning.

Our work in Westmarc during the pandemic has been all about going back to basics. I have been amazed by how fewer, more spaced out but intensive sessions have improved patients' participation in their rehabilitation. We are using a specific number of sessions that include any missed sessions and our FTA rate is a quarter what it was. Fewer sessions and fewer FTAs means our use of Scottish Ambulance Service is much more efficient. We have even negotiated a 2-3pm slot with them that is working well and ensures better use of the gym facility. See also Joanne's article.

High points and amputee related adventures

SPARG: what an amazing group to have been part of since 1991 (see photo 5, 6 and 7). It was set up by my friend and mentor Liz Condie in 1991. I believe our work has helped improve patient care in Scotland, just check out the latest Annual report and our website http://www.knowledge.scot.nhs.uk/sparg.aspx. I will be sad to step down from being chair and I will so miss our biannual meetings and subsequent lengthy session in the pub afterwards. Joanne, Fee, Lou, Mairi, Catriona, Katy, Suzanne, Karen, Sally, Morag, ... too many to mention, thank you for all your support, hard work and friendship over the years. I know you will all do a great job keeping our work going. No pressure!

BACPAR, SPARG's sister organisation, is another fantastic group of physios working so hard to improve care for our amputees. I have been delighted to be a member, to attend your conferences, and to have benefitted from your support of, and interest in, SPARG. Julia, Lou, MJ, Laura, Carolyn, Caroline, Lynn, Kate Rachel and so many others thank you for always welcoming me.

Long term work colleagues become like family. I am lucky to have spent as much time as I have with my Westmarc, SPARG, BACPAR, WCPT-AR and ISPO colleagues (photos 8 and 9). We have had some fun. The International ISPO Conferences are especially memorable. I was lucky enough to attend six and I cannot recommend them highly enough from a learning, networking, social and travelling perspective.

So if you have read to the end, thank you for sticking with it. I wish you well and I hope you get as much joy from your career in amputee rehabilitation as I have had. I am off to the allotment.

MANCHESTER EXPERIENCE OF COVID-19 ON AMPUTEE REHAB

Written by Sophie Racz & Alice Thomas, Edited by Adam El-Sayed.
Physiotherapists at The Specialised Ability Centre, Manchester

Lockdown

While we all had anticipated the likelihood of lockdown and the implications for our service, I don't think the real implications of this had hit home until it actually happened.

Having just migrated to a new computer system, training and planning had commenced and we understood the fundamentals, but like anything you do not truly understand the system until you use it in practice. Concerns such as: how do we cancel patients? What list do they go on to make sure they don't slip through the net? etc. suddenly amassed upon us.

Day 1 of lockdown was a full team effort to deep clean absolutely everything. Subsequent days presented opportunities to have a mass clear out and organisational drive. There were hundreds of appointments cancelled, databases created, priority scales established and phone calls to patients. Anxieties were high as we were waiting to see where we would all be redeployed to. As our centre was based off site, COVID free and completely closed, we were used as a temporary base to lead moving and handling training for redeployed staff in the initial weeks. The whole team rallied together including our admin team who did an amazing job contacting all patients and helping us to draft letters to send out to patients who had upcoming appointment.

Patients were very accepting and understandably had questions such as "when will we be able to come back?", frustratingly, we could not answer. Our managers gave daily updates about the rapidly changing situation at the main acute site and advised on how we should all prepare to be redeployed elsewhere. Within 24 hours of closing our busy centre was eerily quiet. There were no ambulances, no phones ringing, and no smell of toast from the café. It was truly odd.

Staff were frustrated and sad at not being able to provide clinical contact and had overwhelming fear and anxiety about being placed in an acute clinical setting with very rusty skills. Everyone wanted to help and was happy to do whatever was needed with many members of staff being re-deployed to work on ICU.

Two of our physios were redeployed within the medical and surgical teams. Our acute amputee service was managed by them giving some respite from the COVID wards. Staff left on site planned how we were to remodel the service minimising face to face contact and maximise telephone and video conferencing.

Patient Management

All patients accessing the physiotherapy service were phoned by a team member, it was amazing to hear how grateful everyone was for a simple phone call – some grateful for the voice down the phone, some proud to show off how they had progressed so much with their prosthetic rehab and some who needed a little more support and encouragement.

Primary Patients

We implemented MDT primary phone call reviews to gather the subjective information usually gained at the face to face primary appointment. We identified those patients that were healed and had their own transport. Once we reopened (patient transport was not available initially) we provided a face to face objective assessment and cast them if appropriate (the vast majority were).

The MDT telephone appointments involved a socially distanced, loud-speaker call which was led by the doctor with a nurse and physiotherapist present. Much of the physiotherapy role is observation and "hands on": it felt totally alien to not have a person in front of you to assess how they move, assess body language, and build a rapport. Ensuring patients understood what had been discussed over the phone was challenging. During difficult conversations it felt hard to provide emotional support and show empathy without the use of non-verbal communication. We are all taught and know how important this is, but it became very obvious during these conversations.

Interestingly, there seemed to be more patients who had stated from the outset they did not want a prosthesis – as a team this was surprising. Did these patients not wish to attend appointments due to their classification as "high risk" individuals, or, in pre-COVID times was there an element of observing other prosthetic users mobilising around the waiting area at the centre which provided a glimmer of hope leading to the decision to proceed with prosthetic

rehabilitation? The reasons are unknown but are interesting, nonetheless.

Physiotherapy Appointments

We used to see 15 patients in the gym in the morning and operated a very flexible system with appointments overlapping. With restrictions on numbers of people in the gym and with strict PPE guidelines we currently see our patients 1:1 with strict timed appointments. The benefits are the undivided time with the restrictions being the reduction in numbers.

We have adapted our protocols and pathways to accommodate this way of working and have communicated this with the local physiotherapy services that we work alongside to ensure a consistent approach.

Now

These days the clinical environment looks and feels very different for all of us – face masks reduce facial expression for patients and staff, along with muffled sound and an inability to lip read making communication difficult. Reduced clinic activity and no relatives have reduced the noise level, the general hustle and bustle feeling in the centre is gone and consequently reduced the important support that our patients get from each other.

Across most trusts the requirement has been to reduce face to face appointments as far as reasonably practical, we have achieved this by all of our primary patients having the subjective component completed over the phone, allowing an effective triage process resulting in some patients not requiring a face to face appointment.

Effective screening has allowed us to cast the majority of our patients at the primary face to face appointment which has eliminated the requirement for many weeks of EWA with just one session carried out for assessment purposes at the primary appointment.

The medical staff have been able to complete most of their review appointments via telephone which has significantly reduced clinic activity.

Staff Well-Being

We realised the importance of staff health and wellbeing. We planted various flowers on our outdoor terrace attached with messages to help brighten the space. The “treadmill challenge from John O’Groats to Lands End” really took off with the entire centre and being involved. Lunchtime HIIT classes boosted moral and mindfulness sessions were ran by our counsellor who was always on hand to offer group or 1:1 sessions. ‘The wingman lounge’ was run by airline staff was set up at the main hospital site. Staff could go for a brew, delicious snack and a good chat which would always brighten up our day.

The Future

This scenario has highlighted the on-going importance of working as a team to support each other clinically, professionally, and personally, and to having the time to discuss how we are all feeling has really bought us closer together. It created time to review the whole patient pathway and service delivery which will lead to a higher quality, more economical, and more efficient patient experience. We have embraced and implemented new technologies for meetings, and appointments, many of which will be cost and time saving for staff and patients.

In the long term we feel phone reviews will be here to stay across the clinical team. Microsoft Teams or other platforms for meetings have proven effective and are likely to continue. It is maybe too early to say what the “new normal” will look like but it has allowed us to review the whole service and look at clinically reasoning everything we do hopefully for the best outcomes for our patients.

We have really missed the patient contact – we all have “tough” days at work for varying reasons but wouldn’t swap it for the world and feel so privileged to be able to work with such a fantastic deserving group of patients.

MANCHESTER EXPERIENCE OF COVID-19 ON AMPUTEE REHAB – COUNSELLING

Written by Angie Hobson
Specialist Counsellor in Amputee Rehabilitation, The Specialised Ability Centre, Manchester

After the initial shock of 'shut down', there was a general unease which was evident throughout the team. As Counsellor I felt a responsibility to provide a focus on the mental health of our team members, including myself.

Our Trust has an amazing package of support in place aimed at the emotional health and wellbeing of its employees, but they increased the offer with daily emails with links to information and advice. These included 'wobble rooms' at main sites and phone-in sessions for staff to talk through difficult experiences and subsequent emotions. More recently the Trust printed and circulated mini manuals with all the employee health & wellbeing information readily available in one place.

In the early days, I offered staff group relaxation sessions and short workshops on managing anxiety and included different coping strategies – the feedback received was that these were really valued but also that staff felt reassured that they weren't alone in experiencing some of their reactions. Some team members I supported on a 1:1 basis, normalising emotions and providing advice and signposting.

Later, I was called upon to contribute to some of the wider service work-streams which took place and it felt like a positive experience to influence some of the processes and pathways from a mental health perspective.

Demand has significantly increased, especially from the first days of the primary telephone assessments. I have been constantly working 'on the 'phones'. Some contacts are actual telephone counselling and I have adapted my consent and contracting accordingly. However, more and more contacts are emotional health 'check-ins' and patients are appreciative of the contact which I am viewing more on a short-term 'preventative' basis.

Offering telephone support has proved demanding in terms of this different way of working and I have refreshed my skills by completing COVID related CPD training opportunities on-line. During telephone contact, the loss of a patient physical presence in my office has felt difficult, not knowing if a patient has become too distressed to respond or if they have been cut-off during a period of silence.

The genuineness of the contact, making eye contact and body language, has diminished but I have worked hard to compensate for this by extra reflection and statements of affirmation. I have felt emotionally drained myself as there has been so much high expressed emotion, with so many patients becoming so isolated and overwhelmed. I have accessed additional supervision and made time to make use of the upgraded free apps available across our Trust.

The general sense of unease around seems to have lifted now, being replaced by 'lockdown lethargy'. There feels less of a timescale for everything to return to whatever our new 'normal' is going to be. I'm getting to meet some of the patients with whom I've only had telephone contact with from their first contact. They've told me that this has felt reassuring – but their mental image of me has been nothing like the 'real' me though – I'm not sure about this!!! I'm continuing telephone work for now, this may be supported by 'virtual' appointments at some stage, which will be another challenge for both myself and our patients.

I wouldn't like a repeat of the period of intense sadness and despair, which was relatively short-lived. At one time it felt like every patient I spoke to had really 'hit' an emotional low. More recent appointments have been more balanced and, as such, less demanding in terms of risk assessment and risk management. It has felt pressured to crisis manage and raise safeguarding concerns with difficulties contacting other agencies.

Flexibility and adaptability, in terms of working practices, seem to be the key on a practical level and promoting and maintaining good levels of emotional resilience feels a high priority in terms of the mental health of all us right now.

COVID CHANGED OUR PRACTISE – FOR BETTER OR WORSE?

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Background

WestMARC is the prosthetic rehabilitation centre for the West of Scotland located in Glasgow. It provides the prosthetic service for 5 health boards (50% of amputees in Scotland). The WestMARC physiotherapy team provide prosthetic rehabilitation for all patients in the Greater Glasgow and Clyde area.

The Primary clinic at WestMARC was AHP led and before the current COVID-19 pandemic there were 5 appointment slots each week. Referrals were screened and appointed as appropriate. Patients were allocated to a prosthetist and most had a cast taken at their clinic appointment, taking delivery of their prosthetic limb one week later. The average number of sessions for patients attending WestMARC was 25 for transtibial amputations (TTA) and 31 for transfemoral amputations (TFA), the majority provided as two 4-hour sessions per week.

However, following lockdown on the 23rd March 2020 we were faced with many challenges to overcome if we were to continue to provide a service to our primary amputees in the West of Scotland. One Board kept its patients as in-patients: three Boards lost their gym and physiotherapy services as the physiotherapists were pulled to cover critical care.

What did we do?

We were privileged to have a large gym area and although two members of staff were seconded to other areas, we did retain three full-time members of staff and our technical instructor.

We wanted to ensure that patients were not lost to the system during this time but realised that completion of a referral form would not be a priority in the middle of a pandemic. Our colleagues who completed the referrals had been seconded to critical care, so we contacted them and created an abridged form with the minimum information we required. By doing this we hoped to receive the details of all patients and we would be responsible for contacting and updating them.

Our patients were mainly in the high and very high-risk category and as such we had to ensure we could provide space for 2m distancing, full PPE for all staff and minimum numbers within the building. We contacted the ambulance service who was providing single patient return journeys. At this time, a risk assessment was compiled using guidance from government websites and the CSP.

As an MDT we quickly realised that we were unable to deliver a limb to patients unless we could provide the rehabilitation required to ensure they were safe to use it. This meant what were traditionally patients from our local area plus the three areas which had lost their physiotherapy service

All patients were contacted and offered either a phone call or a 'Near Me' video consultation: this allowed us to introduce ourselves, complete the risk assessment, a subjective examination, answer their questions and allocate appointments appropriately.

We screened patients by category, as identified by the risk assessment, level of amputation, previous mobility, general health, housing/social issues, support and cognition. On offering patients an appointment, we informed them of the precautions which we had put in place but also made them aware that there was an increased risk of encountering the virus, if they attended here. Only one person declined when offered an appointment. If a patient was in the very high-risk category but elected to attend, we contacted their GP prior to offering an appointment.

The Primary Clinic ran as usual on Tuesdays but initially there were only 1 or 2 appointments each week. Patients attended for an objective examination and casting, returning one week later for a joint physiotherapist / prosthetic appointment. They took delivery of their limb at this session and were given a further physiotherapy appointment, usually the following week. Each patient had an allocated physiotherapist and all sessions were on a 1:1 basis lasting approximately 2 hours. Follow-up sessions were provided as required by each individual patient: these were far fewer in number. The goal was to treat all unilateral TTA within 5 sessions, TFA and bilateral TTA within 10 sessions, this included appointments which a patient failed to attend. If they cancelled consecutive appointments, they were not given another appointment at that time but asked to contact us when they were able to attend again. Near Me consultations were provided as required between sessions. Most of our patients required ambulance transport and these were single patient journeys: the crew usually

brought the patients in and then waited on them, which meant they were in the building for a minimal amount of time. The maximum number of patients we had in the gym at any one time was three.

Our gym capacity under COVID regulations is 22 and so we were gradually able to increase our primary clinic appointments to 5 each week by the end of May. This allowed us to gradually reduce our waiting list but at this time we realised that we had several referrals for renal patients who attended for dialysis three times a week and were shielding. These patients could not attend WestMARC and so following consultation with their GP's and renal staff, we arranged to visit them either before or after their dialysis sessions. The first 2 sessions (cast and fitting) were joint physiotherapist / prosthetic appointments and following this further physiotherapy sessions were provided by WestMARC if they attended a dialysis unit which was local to us. There were 3 patients who we were unable to provide treatment for but on each occasion colleagues from other sites, who worked in other fields but had previously worked with prosthetic patients, stepped in and provided the physiotherapy intervention these patients required. Moving into level 3 also allowed us to begin visiting these patients in their own homes.

What was the outcome?

- There were identical patient numbers (n=-91) and very similar levels of amputation to the same period last year

- Patients attended for fewer treatment sessions: 5 at unilateral TT level and 10 at TF or bilateral TT.

- Use of Near Me was positive pre clinic but we no longer have a need for this, as we are now able to provide appointments within optimum timeframes.

- The milestone "days to cast" (the number of days from amputation to casting) for unilateral transtibials was 1 day less this year than last year, over the same period of time (42 days in 2019 and 41 days in 2020).

- Our FTA rate in the physiotherapy gym has reduced from 20% to 5%.

We no longer have a waiting list and our primary referrals are being seen at clinic at 3-4 weeks post amputation as before. However, as the demand for physiotherapy sessions has gradually built up but with all restrictions still in place limiting our gym capacity, we had to reduce the number of clinic slots to 4 per week.

All of the above was possible as we were only providing treatment for our primary patients and by the beginning of August we were aware that there was a list of patients whose treatment was put on hold at the end of March when lock down was announced. We had been in contact with them by telephone and Near Me but felt we should be offering them face to face appointments if required. Our colleagues in the other centres were planning how they could resume their outpatient services and so from the week beginning the 11th of August we informed them that we would no longer be able to provide outpatient services to their patients but that we would continue to provide treatment sessions to anyone who was receiving treatment at present. We had been in communication with them throughout, usually sending updates via email but at this point we collated a document with all relevant dates and treatment details, which was sent to each centre.

What have we learnt?

Each session is more focussed and more productive, so patients need to attend less often. Using the agreed goals and number of session's sheet with each patient, as well as counting missed sessions within this agreed number, has significantly reduced the FTA rate. Patients take more responsibility for their own rehabilitation and are working harder between sessions. We think this is because progress is rewarded with further treatment, lack of progress with less.

What is worse?

Reduced peer support for patients due to reduced numbers in the gym and no group work.

Conclusion

Would we have initiated these changes, which have been largely positive, if there had not been a pandemic? The answer is no.

MY EXPERIENCE OF WORKING DURING THE COVID-19 PANDEMIC

Rachel Humpherson
Clinical Specialist Physiotherapist North Europe Össur Academy – rhumpherson@ossur.com

It's safe to say that 2020 has not gone how any of us expected it to. Working in a clinical specialist physiotherapy role for a company that sells non-invasive orthopaedic and prosthetic products, I already have a less typical role than most BACPAR members. Usually, my day often involves travelling the country to one of the UK regional limb centres or their satellite clinics. I am there to provide product support and training for the physiotherapists and prosthetists, and often this involves seeing their patients too. Office days also aren't the norm, as they can be full of meetings about products or developing new therapy resources with global colleagues. Always looking at the future and change for not just the UK, but the whole of the North Europe area. The start of this year involved seminars across Europe for clinicians on running solutions and early amputee rehabilitation, as well as user events, such as the mobility and running clinics. I managed to squeeze in trips to Estonia and Portugal to present 3 seminars in early March, before Coronavirus decided to put a firm stop to my travels!

Prior to lockdown, the UK Prosthetics team had been starting to follow in the footsteps of our Bracing and

Supports team who have been running online training and webinars over the last couple of years. We began experimenting by presenting new products internally, testing out multi-camera setups and showmanship to our North Europe Academy and sales colleagues. Then, a fortnight before lockdown, we were told not to go to the office. Cue home offices and our new "studio" from one of our living rooms, but then we hit full lockdown. As we all tried to wrap our brains around a pandemic, blending our home and work lives, our full email inboxes showed us that our customers were in need. With most services reduced to skeleton staff and emergencies only, and staff furloughed or working remotely; we knew there could be no question of the Össur Academy team being furloughed. Our customers were still working and making plans, and our team wanted to be there for when "normal" service could resume.

We embraced the company's motto of "Life Without Limitations" jumping out of our comfort zone and straight into the webinar world! The first session on 31st March was on Pro-flex feet and although we had just one person join, this made it perfect.

It allowed us to be interactive, we got to see our customer through their webcam, they could interrupt and ask questions, and it calmed our nerves about the following 3 webinars that week. We soon got into a good rhythm with various topics and products, running 3-5 sessions a week, and enjoying seeing some familiar faces join as word spread of our sessions. Fast forward to the end of August and we've done 38 small Zoom meetings (where we are able to see all participants if they wish), 6 large Zoom webinars and 12 centre specific tailored virtual training sessions. It's been a quick learning curve!

Now that services are returning, we've had to adapt to yet more change. We have moved back to the office, to stream from a new studio with ceiling cameras, tripods, pull ups and mannequins missing various limbs. This space has proven especially helpful for some of the socket training, which can get messy! We are now able to provide virtual support and training to clinics as they bring patients back into clinic and means we can be there for more than one centre in a day.

We have also had our first face to face clinic visits - the first in 19 weeks! Although the current restrictions meant that the two of us had to travel separately to the clinic, we still stopped at our favourite services for coffee (Gloucester of course). With much quieter clinics, it was quite nice to have protected time with both the prosthetist and physiotherapist without anyone having to rush off to see other patients who had arrived early. The addition of full PPE in the clinic wasn't too much of a shock, although we were lucky it wasn't during the African heatwave! All in all, a really enjoyable visit, and a happy patient set up on a new knee and foot.

These last few months, although some of the most difficult and nerve wracking we've all ever faced, have also been hilarious, full of virtual coffee-breaks and a reaffirmed sense of gratitude...mostly for our hairdressers and how much we rely on them to save us from embarrassing home haircuts!

As we enter the next phase of the pandemic, I am intrigued to see how much of our fast-paced lives will return, and how quickly. This experience has certainly allowed us to reflect on "normal" working life and re-evaluate how technology can help improve our practice. For now, Össur Academy will be taking advantage of our new presenting skills and webinar studio, to continue with virtual training sessions.

You can catch up on some of our larger webinars, with recordings available on our website. https://www.ossur.com/en-gb/professionals/webinars.

AND HOW WAS IT FOR YOU?

Complied by Sue Lein, Joint Journal Officer

When the Journal Officers appealed on our Facebook page for members to share their experiences at the height of the pandemic in Spring/Summer 2020, Louise Tisdale told us about her work and has now updated us on the situation. Subsequently two of her patients kindly added their experiences and reflections too. This gives us snapshot of one centre's experiences.

Lou remained in her Clinical Specialist role at The Maltings Mobility Centre, Wolverhampton while prosthetists and technicians were furloughed. *"During Lockdown proper I spoke to and saw many of our patients but put my hands on no-one. Now I am hands-on with fewer patients in a day. But the patients are so pleased we can continue their treatment – surprisingly of those Primaries we had started to rehab pre-Lockdown few have developed any issues. Those not seen before Lockdown don't know any different!"*

And as the situation eased: *"Patients are currently seen on a one-to-one basis only. They get a full hour of my attention because I am making the most of seeing them just once a week in most cases so I can get through the backlog. I had lost my band 5 to redeployment- a new Band 5 starts in early September so we can hopefully increase patient numbers."*

And any unexpected benefits? *"I am enabled to do video calls if I need to in order to triage patients"*

Our first patient had an amputation in February for Peripheral Vascular Disease and spent 10 days in hospital post-operatively. We asked what happened during the Lockdown? *"During coronavirus and not being able to attend physio, contact was still maintained albeit via*

telephone conversations. The physiotherapist liaised with the District Nurses to formalise treatment to enable the scar to heal."

We asked what had been the negatives? *"Coronavirus. Having started my physio on 28th February it ended on 19th March due to lockdown. Restarted on 30th June. Any negatives have been outside their control: coronavirus and scar not healing quickly."*

Rating the service 10 out of 10, the patient was asked for any future recommendations. *"I have not encountered anything which I feel should be changed or possible improvements.*

Keep up the excellent work. Losing a limb is a huge shock and patients need to be reassured and given confidence. Some more than others. They say patience is a virtue. Even more so in these situations from both parties."

And what had they learned about themselves? *"I am a positive and determined person and was determined I was not going to let this affect my life. I am determined to have as normal a life as possible. I think the staff and physio saw this in me and in our discussions and this has enabled all of us to have an excellent working relationship and make the progress we have. Losing a limb does not mean a drastic change in lifestyle. It does initially, but as the days and weeks pass and with the help of physiotherapist and other staff life does start to get back to some normality. It does take time."*

The week before lockdown, our second patient had a below-knee amputation following years of suffering venous leg ulcers which they say had seriously affected both their physical and mental health. The decision to proceed had taken over a year. *"Firstly, my experience of becoming an amputee has been one of the biggest and most life changing decision I've yet to have made."*

What impact did COVID-19 have? *"While recovering it was clear to see that things were changing with visitors not allowed to visit me and other patients on the ward due to the cases of coronavirus increasing day by day. I was discharged on the Sunday of that week after just 7 days post amputation. Finally, my recovery began. It was incredible to finally have been rid of the bane of my life."*

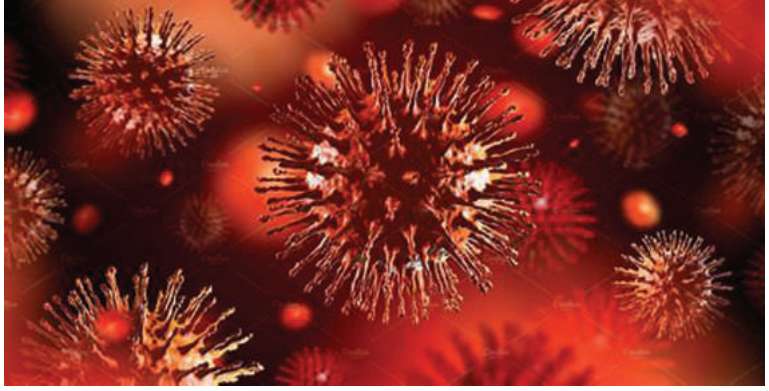
"Due to COVID-19 outpatient appointments had ceased so this had left me between a rock and a hard place. This made me feel hopeless and forgotten, not disregarding the telephone support from the rehabilitation team."

And when the restrictions eased? *"So finally, the day came where I had a glimmer of hope. A telephone call that I could start to attend for physiotherapy. The feeling this gave I am unable to put into words: Euphoric!"*

"Now around 7 months down the line I have my prosthetic leg, which I genuinely now feel like a millionaire, I can't quite believe my luck."

With thanks to Lou, and her patients for giving their time to share their experiences. But what about you? What are your reflections on this period? How did your more established patients find the changes? Are you planning to do more tele-consultations – or tele-rehab? Has COVID-19 bought about some opportunities for positive change? What ideas has reading this prompted in you?

For the next Journal we are interested to hear from other members about their experiences during the pandemic: this can be via an article, or why not write to the Letters Page?



MY COVID POEM

Hayley Freeman
Senior Physiotherapist Gillingham DSC

Wow 2020, what a year!
No-one could predict it as we welcomed it in with a beer!

There were rumours and murmurings of something "Covid",
And by March it's global effects had exploded.

On 26th the Government finally took stock,
as lockdown was announced at 8 o'clock.

So the schools, bars, gyms and shops were closed,
We were told "stay at home and save lives" as the importance was exposed.

That was not a choice for us key workers though,
All deployed back to the respiratory wards, even from amps and ortho.

We embraced it with feelings of bravery, pride and fear,
All working together as one, staying positive as the "peak" grew near.

I refreshed my forgotten skills from suctioning to proning,
Managed chest drains, post ops and discharge planning.

It was a steep learning curve from the comfort of my DSC,
To the fast paced, phlegmy world of respiratory!

It was a scene like no other that I had known,
PPE, ITU in theatres, no visitors and patients feeling very alone.

There was talk of running out of ventilators and hospital beds,
We were living in a nightmare, not even enough morgue space for our dead.

Despite the fear we continued with a smile, even those who were once retired,
Across the country we were thanked and admired.

Weekly clapping on a Thursday night,
NHS discounts and rainbows in windows, it was quite a sight.

Sadly some of our courageous peers did not make it,
Each year in memory and thanks a candle will be lit.

We were amongst the destruction this Corona Virus caused,
Each and everyone of us definitely did deserve the applause.

Our working life has changed a lot, less of us in one room,
All communicating by apps, virtual courses and meetings via Zoom!

Despite the chaos, changes and future unknown,
We united together, specialism aside, with no physio left alone.

I am proud to say we handled this epidemic with grace,
Our loving, glowing hearts trying to protect our Human Race.

I am honoured to be a physiotherapist alongside you,
And during a second peak I'll happily share my toilet tissue!

RETIRING… AND RETURNING!

News came through in August that Louise Whitehead was retiring.

Louise has been a long-term member of SPARG, first joining in 1995. She has been a fierce advocate of all things SPARG and amputee rehab supporting its data collection work, playing a key role in its Exec Committee, in the development of the Trans Femoral Predictor (TFP), presenting at local and international conferences, being SPARG rep to BACPAR and SPARG Treasurer.

But… she is planning to return to work two days a week in outreach amputees and will still be part of SPARG and BACPAR: her SPARG colleagues have already welcomed her back with open arms!

We join with her colleagues in thanking her for all she has done for SPARG and BACPAR and wishing her well for a long and action-packed working retirement!

A Juzo training app is available containing information for clinicians and patients:

Apple
http://itunes.apple.com/gb/app/juzo-care/id1497424832

Android
https://play.google.com/store/apps/details?id=com.juzo.juzocare

New Email Contacts

There are new Email addresses for the North West Regional Rep:
northwestBACPAR@gmail.com

and the New South West Region's Rep: BACPAR.southwest@gmail.com

GUIDELINE NEWS

Our updated NICE Accredited Prosthetic Guidelines should be ready soon and we aim to send hard copies out with the Spring 2021 Journal. Meanwhile please see 'Information to Support the Launch of Updated Guidelines' on page 8

We aim to have regular updates on guidelines as there are more that require updating - please watch this space. There will be calls for members to join future working groups!

We need you – yes YOU – to contribute to our new 'Member's Profiles' page for future editions. Do you do a really unique job in amputee rehab, or do you do what you see as a really 'ordinary' role? Every role is important and interesting and we'd love to read about it. Volunteer NOW so you are committed and write us a 300-400 word piece (and provide a picture if you like). The Editors

Biomechanical Adaptations in Performing Activities of Daily Living When Using a Prosthesis Simulator

Gemma Boam
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Introduction

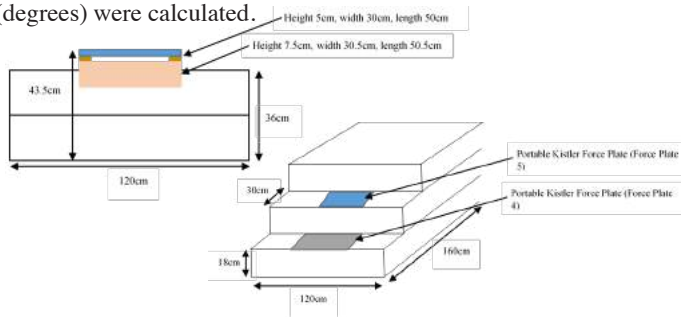
Major lower-limb amputation is a life changing surgical procedure to treat complications of diabetes and disease, infection and trauma. Accomplishing independence in activities of daily living (ADL) for a lower-limb amputee is a priority that involves many aspects, such as prosthetics and physiotherapy [1].
Gait and ADL tasks such as getting up and down in a chair and climbing stairs can assess walking velocity, hip and knee flexion adaptations [2]. Although these may be straight-forward for able-bodied individuals, they are demanding for transtibial and transfemoral amputees. Not only is it a demanding task for an amputee, but the oxygen uptake would be higher for this particular population type [3].

Amputees have a less stable gait pattern and an increased chance of falling, meaning that they would rely on their prosthetics to provide a sense of proprioceptive information regarding to their prosthetic-foot position in relation to the ground. The increased risk of fear of falling that amputees experience can cause ADL to be avoided in some cases. This can lead to complications such as reduced strength, endurance and balance as well as potential health problems.

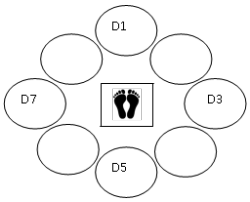
Aim: To determine how healthy-bodied individuals adapted when performing stair climbing, stand-sit-stand and a Limits of Stability test whilst wearing an amputee-like mechanical constraint, and whether there were other limiting factors that influenced their performance.

Method

The research was split into two studies in which healthy-bodied individuals completed trials in a control (CON) condition and under the manipulation of a rigid ankle-foot orthosis (RES). Participants were instructed to wear flat trainers and shorts for the duration of the data collection.
For the first study, nine adults (five females) completed five sets of sets of stand-sit-stand and six sets of stair-climbing trials. Time taken (seconds), limb impulse (percentage) and trunk range of motion (degrees) were calculated.

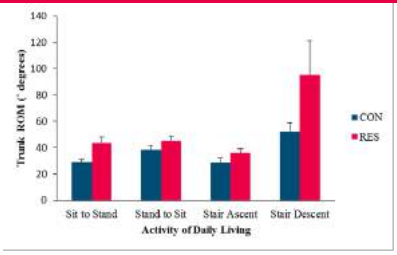


For the second study, five adults (three females) completed six sets of the Limits of Stability test. Participants were instructed to stand on a force plate and lean to one of eight targets positioned as shown on the computer projector screen. Center of pressure excursion (centimetres), and reaction time (seconds) were calculated.



Retroreflective markers were attached to body landmarks and were recorded by a nine-camera motion capture system at 100Hz for all participants. A random number generator was used to determine the ordering of activity and condition for each participant.

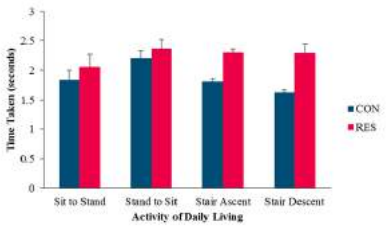
Results



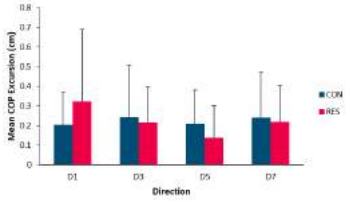
Trunk range of motion (ROM) was higher during all RES sit-to-stand and stand-to-sit ($P < 0.05$), stair-ascent and stair-descent ($P < 0.05$) in comparison to CON.

Impulse was higher during RES trials of stair ascent and stair descent ($P > 0.05$)., and there was an effect between left-leg and right-leg impulse ($P < 0.05$). Right-leg impulse was lower in CON and RES sit-to-stand and stand-to-sit trials ($P > 0.05$).

The time taken to complete the activities were longer during all RES trials for stair ascent and stair descent ($P < 0.05$), and sit-to-stand and stand-to-sit ($P > 0.05$).



Reaction time during the RES condition was slower than CON across all directions during the Limits of Stability test, ranging from 0.4 to 0.6 seconds during RES trials ($P > 0.05$). RT was consistent across CON directions at times ranging from 0.4 to 0.5 seconds ($P > 0.05$).



Center of pressure (COP) was greatest in RES direction 1 (D1) trials, but remained of similar values in CON trials ($P > 0.05$).

Discussion

Manipulating range of motion at the ankle joint altered the lower-limb use. Participants shifted their weight onto their dominant leg due to the restriction of the ankle during RES. As they were unable to plantarflex their ankle, participants rolled onto the ankle-foot orthosis during stair descent, making it easier to manoeuvre down the steps. The time taken and reaction time increased during RES trials. This could suggest that participants were cautious about losing their balance whilst their ankle joint is restricted.
Although these results, there may have been psychological factors that influenced the performance during the activities, and whether they made these adaptations to ensure their safety. Exploring physiological and psychological theories may be beneficial, and requires further research to determine the extent of these variables when individuals of all ages and amputation levels are adapting to ADL.

References

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Demographic and Length of Stay Data for 2018 ICHNT Patients Following Lower Limb Amputation

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Background & Aim

Imperial College Healthcare NHS Trust (ICHNT) is a vascular hub in West London and has a major trauma centre. Patients undergoing lower limb amputation are seen from pre-amputation throughout their rehabilitation by the amputee rehab specialist physiotherapy team. There is very little published data regarding pre-amputation consultation rates and discharge /rehabilitation location in UK hospital trusts. This work may help to aid other similar services to benchmark their outcomes. Data on length of stay and mortality can be compared with the Scottish data (SPARG Report, June 2019).

Aim: To review the demographic; pre-amputation rate; length of stay and discharge/rehabilitation location data for ICHNT patients undergoing lower limb amputation in 2018.

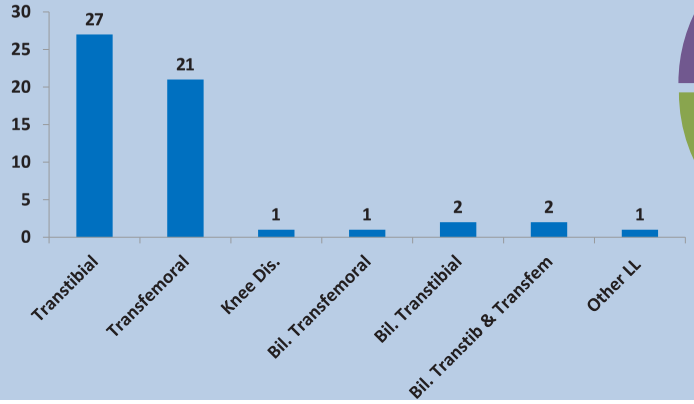
Method

An excel database is kept on all patients undergoing amputation surgery at ICHNT. Data on general demographics, cause of amputation, length of stay, rehabilitation milestones, discharge location and outcome measures are recorded on a regular basis. Patients are seen initially by the acute ward based therapist and an exercise programme is started on day one post-operatively. They are given the Physiotherapy Regional Prosthetic Audit Group exercise sheet. Patients attend the rehab gym on a daily basis (combined in and out-patient session) when they are medically stable and able to tolerate 2-3 hours in their wheelchair. On discharge they are either referred to their local prosthetic/rehab service or continue their rehabilitation at ICHNT, attending 3 times per week for 1-1.5 hour sessions of physiotherapy. Treatment frequency reduces once their prosthesis is fitted and they are walking at home to 1-2 sessions per week as required.

Results

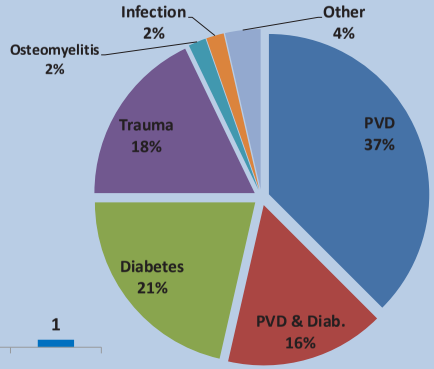
There were 52 lower limb amputations performed in 2018. Mean age of the patients was 64 years. The male: female % ratio was: 75:25 % in 2018.

Level of Amputation



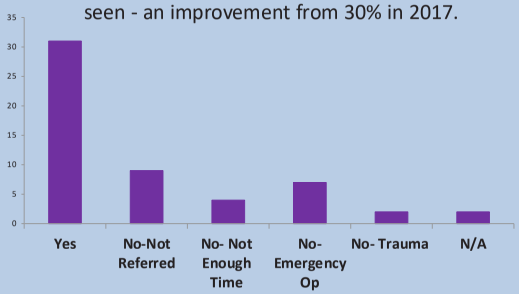
Cause of Amputation

Dysvascularity/diabetes (75%) continue to be the main cause, although ICHNT has a higher than national average of trauma cases 17%.

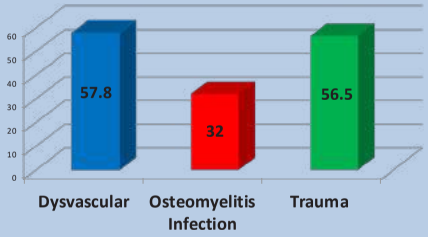


Pre-amputation Consultation

For pre-amputation consultation, 55% of patients were seen - an improvement from 30% in 2017.

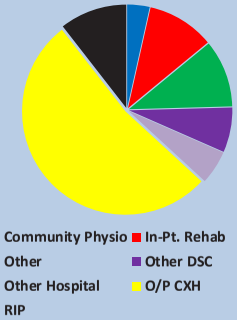


Mean Length of Stay (Days)



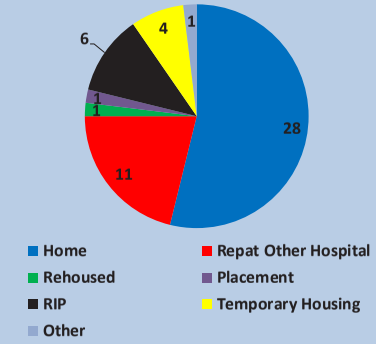
Rehabilitation Location

55% of patients stay within the ICHNT out-patients service for rehabilitation.



Discharge Location

54% of patients went home after lower limb amputation surgery, 21% were repatriated to other hospitals. Mortality data at 30 days post-op is 7.7% (comparable to the Scottish data 6.9%), overall mortality was 11% post lower limb amputation.



Conclusion and Discussion

As a service there is ongoing work to try and improve our rate of pre-amputation consultations and clearer documentation of why these were not achieved. Early communication around planned amputations is key in achieving pre-amputation consultations. Length of hospital stay remains relatively long (median= 44 days) and there are plans to explore the reasons and aim to reduce length of stay. Benchmarking our service with other acute units will be valuable.

Acknowledgements:

The amputee rehabilitation team physiotherapy team for ongoing data collection. Imperialamputeerehab

Reference:

A Survey of the Lower Limb Amputee Population in Scotland 2016- Public Report (Scottish Physiotherapy Amputee Research Group)

NHS Imperial College Healthcare NHS Trust

EXERCISE at the bedside for chronic critical limb ischaemia (CLI) patients during their surgical admission: Proof of Concept Study Protocol

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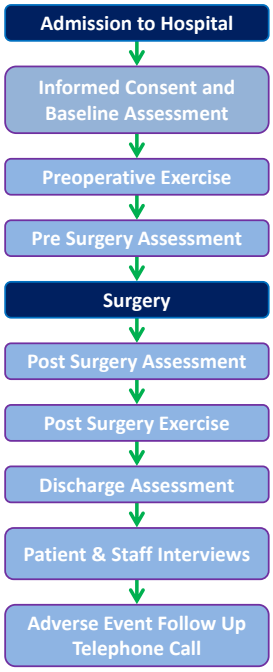


Fig. 1. EXERCISE Study Flow Diagram

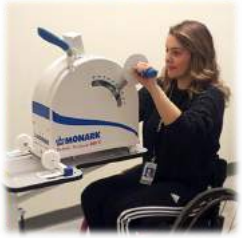
Background: CLI patients having surgery is complicated by the presence of multiple co-morbidities and older age. Their overall fitness will be low, as they are often de-conditioned due to disease progression affecting mobility and functional activities. We therefore propose an exercise intervention to prevent further deterioration and aid a speedier recovery by improving blood flow to the healing tissues. However, as a structured physical activity programme has not been undertaken at the bedside, we will first need to understand if the intervention we propose is feasible.

Methods: This is a prospective single cohort study in patients with CLI having angioplasty, bypass and/or amputation surgery, admitted to the vascular surgical ward, in an NHS teaching hospital, using a sequential embedded mixed methods study design.

Exercising patients with CLI on the ward. Can it be done?

INTERVENTION:

- Twice daily inspiratory muscle training at 20-30% of maximal inspiratory muscle strength, using POWERbreathe Plus .
- Daily aerobic training for 30 mins at 40-70% predicted heart rate reserve, using Monark 881E arm ergometer.
- Upper arm strength training exercises, to a Borg scale rating of 13-15, on alternate days.



Feasibility Outcomes	Efficacy Outcomes
Eligibility rates	Quality of Life questionnaire SF 36
Recruitment rates	Post operative complications rates
Loss to follow up	Mortality at 30 days
Withdrawal rates	Re-admission within 30 days
Deliverability of intervention	Return to theatre within 30 days
Assessments completion rates	Hand grip strength
Adherence to intervention	Maximal inspiratory pressure values
Compliance to intervention	Sub-maximal aerobic fitness values
Evaluation of data collection methods	Length of stay
Completeness of data collection	Adverse events

Qualitative Study: Semi- structured interviews with patients (n=20) and healthcare staff (n=12) to understand ….

Tolerated Communication Research Processes Social Values
Acceptability Facilitators Safety Impact Burdens Perspectives
Fears Training Health Quality of Life Exercises
Challenges Fit for purpose Barriers

Data will be analysed using thematic analysis from a social constructivism perspective

HaB International has kindly loaned the exercise equipment for this study

Contact: Jo Palmer, Academic Vascular Surgical Unit, Hull Royal Infirmary, Hull, HU3 2JZ Email: Joanne.Palmer@hey.nhs.uk

Can the BLARt predict likelihood of prosthetic limb fitting? A retrospective review of 100 patients.

Suzanne Howie, Specialist Physiotherapist
Katy Bryce & Catriona Mawdsley Amputee Team Lead Physiotherapists
Astley Ainslie Hospital, Physiotherapy Department, NHS Lothian, Edinburgh

Introduction

Following major lower limb amputation in Scotland, 44.6% of individuals are successfully fitted with a prosthetic limb (1 - SPARG 2016). The reasons for not limb fitting are multi-factorial but include factors such as cognition, presence of co-morbidities and issues with the remaining limb.

To provide an effective and efficient service, the team must work together towards goals agreed with the patient (2 - BACPAR guidelines 2016). A tool to predict the likelihood of limb fitting could assist with early goal setting, expectation management and discharge planning.

The Blatchford Leicester Allman Russell tool (BLARt) offers a preoperative assessment based on objective evaluation of underlying clinical variables and their influence on rehabilitation (3). Patients are scored on 8 variables: Age, gender, BMI, amputation level, cause of amputation, pre-amputation mobility, co-morbidities and cognition. The BLARt score is converted into a percentage likelihood of a patient progressing to walking with a prosthesis (see table 1).

Table 1

BLARt category	Likelihood of walking with a prosthesis
≤ 13	85% Likelihood of walking with a prosthetic limb (with or without walking aids)
14-21	21% Likelihood of walking with a prosthesis (with a walking aid)
≥ 22	Will not use a prosthetic limb

Aim

- To determine whether the BLARt was able to predict limb fitting outcome in a cohort of 100 consecutive patients who had major lower limb amputation at the Royal Infirmary of Edinburgh (RIE) in 2019.
- To ascertain if the BLARt could be introduced within the acute setting to help determine the most appropriate rehabilitation pathway and assist with goal setting and managing expectations of patients and their relatives.

Method

- 100 consecutive patients who had undergone major lower limb amputation in the Royal Infirmary of Edinburgh in 2019 were identified using SPARG data.
- The patient cohort included amputations carried out on the vascular, orthopaedic and renal units and used the final amputation levels.
- Electronic hospital patient records were used to complete the BLARt for each patient. This was completed by 3 experienced specialist amputee rehabilitation physiotherapists .
- The BLARt score for each individual was calculated so they could be allocated to the appropriate BLARt category (table 1).
- The percentage of patients fitted with a prosthesis in each category was then calculated (see table 2).
- The percentage fitted was subsequently compared to the BLARt predicted percentage limb fitted within each category (see graph 1).
- Reasons for not limb-fitting were identified from patients' individual electronic clinical records.

Results

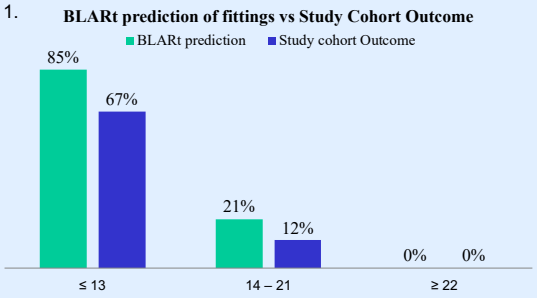
BLARt scores were calculated for all 100 patients and table 2 below indicates the number of patients in each BLARt category and the percentage of the RIE patients limb fitted.

Table 2

BLARt Score					
≤ 13		14-21		≥ 22	
N = 43		N = 41		N = 16	
29 fitted (67%)	14 not fitted (33%)	5 fitted (12%)	36 not fitted (88%)	0 fitted (0%)	16 not fitted (100%)

The percentage of patients fitted in the RIE was less than the BLARt prediction in both the 13 and under category and the 14 to 21 category. See graph 1.

Graph 1



There were a number of reasons why patients did not proceed to limb fitting (see table 3). This included 10% of the total cohort who chose not to attempt limb fitting.

Table 3

BLARt Category	Reasons for not limb fitting	Number of patients (% per category)
≤ 13	**Wound issues**	6 (14%)
	Co-morbidities	3 (7%)
	Refused a limb	4 (9%)
	Died	1 (2%)
14-21	Co-morbidities / medical issues	23 (56%)
	Refused a limb	6 (15%)
	Died	7 (17%)

Conclusion

- This study identified that factors outwith the BLARt accounted for the difference between the BLARt prediction percentage and the percentage fitted in this study (see graph 1 and table 3).
- This study supports Bowrey et al (2018) in identifying that no patients scoring ≥ 22 were limb fitted.
- The BLARt can be used in conjunction with a comprehensive multi-disciplinary assessment but should not be used in isolation to predict likelihood of prosthetic fitting.

Future Work

- Feedback of project to colleagues working in acute wards and trial of BLARt within clinical practice.

Acknowledgements / References

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3) Bowrey, Sarah et al (2018); Development of a scoring tool (BLARt score) to predict functional outcome in lower limb amputees. Disability and Rehabilitation

The clinical justification and benefits to providing patients with a pre amputation consultation.

Rebecca Bettinelli BSc MCSP, Guy's & St Thomas' NHS Foundation Trust Physiotherapy Dept., Bowley Close Rehabilitation Centre

Guy's and St Thomas' NHS
NHS Foundation Trust

Background

The Bowley Close rehabilitation centre completes an average of 30 pre amputation consultations each year. This is inclusive of inpatient and outpatient consultations. The British Sports Rehab Medicine (BSRM) guidelines recommends all patients undergoing an amputation should be given a pre amputation consultation. We feel it is important that patients are provided with the opportunity to discuss the impact on function and quality of life following an amputation. At Bowley close a pre amputation consultation involves a multi-disciplinary approach, inclusive of a physiotherapist, prosthesis, consultant and occupational therapist. It has often been discussed whether the consultation provides patients with the knowledge to aid their decision process. With acknowledgment in the rise of amputations being performed we want to ensure that our service is supporting patients starting their amputation journey however at the same time ensure patients expectations are being managed.

Aims

1 - To establish if a pre amputation consultation is beneficial to patients

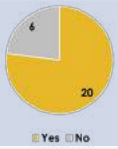
2 - To evaluate the effectiveness of our current pre amputation consultation

3 - To consider what topics need to be discussed during a pre amputation consultation

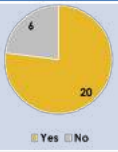
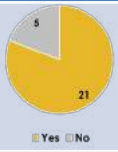
Methods

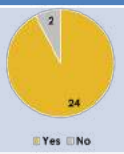
A prospective cohort study was carried out at Bowley Close. Patients who were provided with a pre amputation consultation between the years of 2016-2018 were contacted via telephone. A sample size of 26 patients were contacted. Out of the 26 patients contacted, 16 patients had an amputation and 10 never. Out of the 16 patients who had an amputation, 14 of them went on to be prosthetic user. Patients were asked 11 subjective questions relating to their pre amputation consultation. Answers were divided into 'yes & no' format. For the purpose of service development we did take note of additional comments patients had mentioned regarding the consultation.

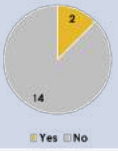
Results

Where you informed about Rehab pathway options?	Where you informed about wound healing?
	

Where you informed that your QOL may not improve?	Where you informed that your function may not improve?
	

Where you informed about phantom limb pain ?	Where you informed abut the restrictions and difficulties of being a prosthetic user?
	

Where you informed about life long commitment to a prosthetic centre?	Did you feel pressured into having an amputation?
	

Did you regret the amputation?	Did you find the pre amp assessment useful prior to your amputation?
	

Did you feel you there was a clear plan about what would happen after your appointment?	Was there anything you felt you encountered along the way that you was not informed about?
	• Phantom limb pain • Pathway options - pros & cons to inpatient and outpatient rehab units • Expectations of level of function • Cosmetic look of prosthetics • Restriction to prosthetics available

Conclusion

This research demonstrates that the majority of patients found the pre amputation consultation helped with increasing their knowledge about life post amputation. This provides sounds support of clinical reasoning for ensuring that we continue to offer this service.

The majority of patients felt their expectations were managed around QOL, function, prosthetics progression and the rehab pathway. Areas that patients felt they had not been informed about in enough depth were phantom limb pain, rehab length of time and prosthetic limitations on the NHS. This highlights areas for improvement within our pre amputation consultations.

The identified areas that patients felt they were not well informed about in enough depth are vital areas of an amputees life. It is with high importance that they must be provided with a clear understating of these topics.

Recommendations

This research alongside BACPAR and BSRM highlights the need to continue supporting patients and surgeons with decision making regarding an amputation. A pre amputation consultation is not designed to make the decision for the patient but to enlighten patients with the information to support decisions making.

Good quality research is needed to determine the overall long term benefits of a pre amputation consultation, with development of a standardised tool to help prompt clinicians in ensuring patients are provided with vital information.

References:

BACPAR guidelines
BSRM guidelines

Acknowledgements:
Katirna Raschen- Physiotherapist at Guys' & St Thomas's Hospital

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FACILITATING ENGAGEMENT IN PHYSICAL ACTIVITY THROUGH REHABILITATION IN THE UK

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Introduction

Introducing physical activity (PA) into one's lifestyle has extensive health benefits, across a range of populations 1 including people with an amputation2,3 and PA may reduce incidents of co-morbidities 4.

The main source of rehabilitation after amputation in the UK is through the NHS with the treatment pathway influenced by the BACPAR guidelines (available at the time of audit) 5 with good practice recommendations for maximum mobility (Clause 6.4.6) and ADLs facilitation (6.2.1). Reference is made to exercise therapy such as is relevant to patient's goals (clause 6.9.2). The extent to which PA is included in rehabilitation is unknown.

Within the population of persons with lower limb amputation (LLA) fitness investigation often focuses on cardiovascular endurance 6,7 without consideration of combined elements of PA identified as objectively tested and rated in non-disabled populations; agility, balance, body composition (defined in the audit as weight to height ratio or fat tissue distribution), coordination, cardio vascular endurance, flexibility, muscular endurance, muscular strength, power, reaction time, speed8. PA participation may be limited by lack of ability in elements critical to the given activity 9.

Sports specific movement such as running, jumping and cutting (turning at speed) are complex movements with high joint moment and joint force implications that, if performed in a similar manner to a non-disabled individual, would require adapted biomechanics10–12. However, the role of the elements of fitness and the importance of teaching altered biomechanics to facilitate LLA participation in PA beyond activities of daily living (ADLs) remain unexplored.

The aim of this audit was to identify, within the UK, any existing training programs that have been implemented for use with LLA in order to facilitate engagement in PA, any validation of these programs and the method of their dissemination.

Thereafter, we aimed to determine if specific elements of PA are emphasised during rehabilitation to encourage PA for health gain. As anecdotal evidence, talking to LLA outside of clinical settings, suggests that sport specific movements are included in rehabilitation, rather than generic training programmes, we aimed to determine which are the most prevalent movements taught and how widespread this teaching is.

Methods

An online audit was developed consisting of 12 questions, a combination of open and closed questions and use of the Likert 5-point scale, with 5 defined as extremely important to 1 defined as extremely unimportant. The questions explored the following themes:

- Demographic of treated patients
- Supporting engagement in PA, including training of sports specific movements and fitness

The audit was performed online, the link was distributed via email to members of BACPAR in the first half of 2017. A consent form constituted the first page of the audit and consent was required to proceed to questions. The study was approved by the authors' University Ethics Committee. Results were analysed using SPSS v21 to identify prevalence of positive responses. The relative importance of the different elements of fitness were reported as descriptive statistics and percentages of the whole.

Results

22 surveys were initiated, 6 respondents did not complete the consent. No link was identified between demographic and type of rehab training.

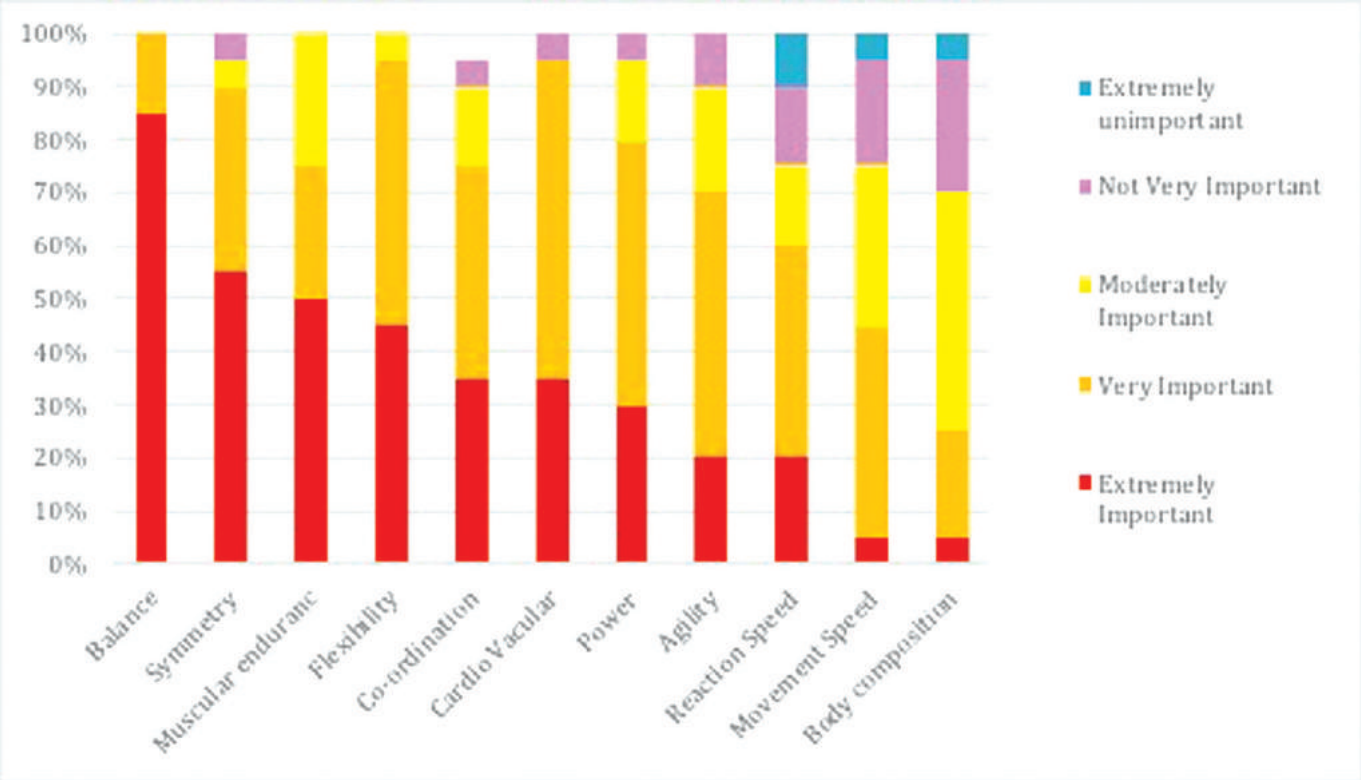

Figure 1: Rated importance of elements of PA. Each component of fitness is listed with the percentage of respondents who rated the component's level of importance in training, presented in order of magnitude based on extremely important.

Elements of PA

75% of respondents did not report any standardised training program, only 1 respondent gave details of the program used. A number of elements of PA, were identified as regularly included in treatment (figure 1).

Balance was the most important element identified, with 87.5% rating 5 out of 5 for importance. The least important element was identified as Body composition, with 6.5% rating 5 out of 5.

Table 1 shows the elements of PA and how important their inclusion in rehabilitation is perceived to be.

Sport-Specific Movements

Turning is taught by 93.75% of respondents, running by 75% and jumping by 56.25%. 87.5% teach specific sports movements with 6.25% specifically teaching cycling techniques (Table 1).

Discussion.

A single respondent indicated that they used a validated training programme but did not indicate any supporting evidence. Thus, there is no evidence that standardised graded exercises or any validated programs are available for engaging LLA in activities beyond ADLs.

Different elements of fitness enable participants to actively engage in PA 8. Balance was perceived as the most important with almost 90% of respondents rating it as extremely important for LLA and 100% seeing it as very important or extremely important. This is likely linked to the important influence it has on gait 13. Research supports the use of balance exercises towards falls prevention in several vulnerable populations including LLA 14.

The high importance ascribed to symmetry (65% extremely important, 92% extremely or very

TABLE 1: PERCENTAGE OF CLINICS, WHICH TEACH EACH OF THE LISTED SPORTS RELATED MOVEMENTS.

	Running	Jumping	Turning	Swim	Cycling	Bending	Movement specific to sports request of individual
Taught	75	56.25	93.75	6.25	6.25	6.25	87.5
Not Taught	25	43.75	6.25	93.75	93.75	93.75	6.25*

**Where total is not 100% some answers were left blank.*

important) may be explained by the feared increased risk of osteoarthritis and other degenerative effects of asymmetry 15.

Traditionally exercise has been prescribed to achieve health-related improvements in cardiovascular fitness, body composition and muscular fitness 16. Thus it is unsurprising that muscular endurance was rated as being the third most important element (50% extremely important, 80% extremely or very important, 100% extremely, very or moderately important) yet, cardiovascular fitness and body composition were perceived as less important with body composition rated as being the least important element. Again, this is likely as a result of needs associated with reasons for amputation and age of individual LLA. Muscular endurance was given greater importance this may also be due to relevance in ADLs17as static muscular endurance is paramount in postural control. Alongside balance, muscular endurance is relevant to fall prevention 18, which is vital for rehabilitation of LLA.

Flexibility is perceived to be important, likely as the BACPAR guidelines section 6.8 recommend exercise to prevent and treat contractures5, thereby making prosthetic rehabilitation more successful 19.

Adapted coordination patterns must be learned to replace the missing anatomical structures and the disruption to the kinematic chain. Co-ordination is necessary in able-bodied subjects for stability of the knee; the ability to control this stability is heavily affected by amputation 20. Thus, rehabilitation that focuses on the development of coordination is perceived to be important (40% extremely important, 86% extremely or very important, 100% extremely, very or moderately important).

Cardiovascular endurance was most frequently rated as 'very important'. Increased cardiovascular endurance reduces metabolic cosy (energy expenditure) for ADLs, including walking 21.

Power, agility and speed were rated as being very important but not extremely important. This suggests they are secondary to PA elements associated with ADL.

Reaction time and body composition received lower recognition, likely that they are perceived to be elements of other aspects. For instance, reaction time improves as coordination improves and body composition is affected by cardiovascular and muscular endurance. Further research is required to understand the motivation for this prioritising, to allow clinical practice and experience to guide development and implementation of training programmes appropriate for LLA.

Many clinics teach sports specific movements but there is little consistency in this, and it is likely patient driven. Research indicates that although disabled athletes are equally vulnerable to injury as non-disabled 22untrained non-disabled individuals can avoid injury by preseason training in a number of sports 23,24. The results from this audit indicate that the altered biomechanics and vulnerability to injury through increased PA is not consistently addressed.

Further research is needed to investigate the level of PA participation in LLA with different levels of amputation and how this relates to their ability to perform different elements of PA.

Conclusion

This audit highlighted the lack of training programs for LLA PA, although elements of fitness are considered in rehabilitation; balance is most often given extreme importance, with symmetry and endurance also regularly seen as extremely important.

It is the recommendation of the authors that a clear and consistent training of elements of fitness is integrated into the treatment pathway and that LLA are encouraged towards PA beyond ADLs. This research was performed as part of a PhD project to create and validate such a program.

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CASE STUDY

FROM NON-LIMB WEARER TO A MICROPROCESSOR KNEE: THE STORY OF 'ANDREW'

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Andrew first came to see us in November 2015. He had a left TF amputation on 08/10/15 for diabetic foot sepsis. He was 41 years of age. Past medical history included T2DM, HTN, asthma, right hallux amputation with an unhealed wound, obesity (weighing 137.6kg) and ? sleep apnoea. He lived alone in a house with stairs, was unemployed and did not drive. He had a girlfriend who lived locally, and they had two children together.

Andrew came for his first physiotherapy outpatient appointment on 02/11/15. He was self-propelling in his wheelchair, but with effort++ due to his BMI. Social history, Rivermead, and goal-planning were completed. Barthel was 15/20, indicating a high level of independence. He had good range of movement throughout both upper and lower limbs, and his lower limb muscle power was 4/5.

The next step would normally have been PPAM aid gait training (because he was too large for the Femurett), but this was deferred due to the unhealed surgical wound on the plantar surface of the right foot which was wet and sloughy. An urgent referral to our diabetic foot clinic was completed. Perhaps not surprisingly, we were advised to avoid weight-bearing.

When we met for the MDT primary assessment, the reluctant decision was non-limb wear (NLW) at that time, but we agreed to review the situation a few weeks later. Two months later, very little had changed, except that his weight had now increased to 145kg. His mood was low, but he had FTA his appointments with our counsellor. Regrettably the decision was still NLW, due to the unhealed ulcer the right foot. Andrew was invited to get back in touch if the situation changed, but for over 18 months we had no contact from him.

In September 2017, we had a letter from Andrew's GP advising us that he had undergone laparoscopic sleeve gastrectomy and was no-longer diabetic. His foot ulcer had healed, and his weight was down to 115kg. He came back to see our MDT on 24/09/17, and his mood was much improved. Phantom limb pain was still an ongoing problem, so he was started on Duloxetine because he was intolerant of gabapentin, pregabalin, and amitriptyline due to side-effects. Physiotherapy was therefore restarted.

Despite his weight loss, Andrew was still too large for the Femurett, so it was necessary to use the PPAM aid for his initial gait training. A trial prosthesis was

then made using a diagnostic socket, which was set up with trial parts (i.e. "pre-loved" components), and a weight-activated knee with HOKL was chosen so that we could trial both a locked-knee and a free-knee. Within 6 weeks, Andrew was independently mobile with two sticks using the free-knee, and we had done stairs, on/off floor, slopes, opening and closing doors, and changes of direction/speed etc. Alongside this, a definitive prosthesis was made, and Andrew took this home just over a week later because we had already carried out most of his rehabilitation on his "trial" prosthesis. Outcome measures within two weeks of delivery home were:

TUAG: 28.3secs (2 sticks)
2mW: 40.0m (2 sticks)
LCI-5: 22/28 + 21/28 (43/56)

In May 2019, we caught up with Andrew for his 12-month post-delivery review. He was confidently mobile with one stick, but his gait displayed a very heavy heel strike on the prosthetic side, and an exaggerated swing phase on the prosthetic side. He was stumbling "regularly" and falling "frequently" and had developed a number of strategies in his gait to reduce his risk of falls. This meant that you could hear him coming along the corridor because of the exaggerated prosthetic knee extension at terminal swing. Nonetheless, his outcome measures were:

TUAG: 13.8 secs (1 stick)
2mW: 86.9m (1 stick)
LCI-5: 23/28 + 19/28.

The slight reduction in LCI-5 reflects that fact that he was becoming increasingly worried about falls, and, as a consequence, was starting to rely on his partner to accompany him on the stairs. In a nutshell, he was outperforming a weight-activated knee, so we listed him for an MPK trial because he fulfilled the indications of the policy.

Prior to the start of the MPK trial, we reviewed the socket and OMs were completed (2 min walk, 6 min walk, RNLI and PEQ). The two main goals that Andrew voiced were:

1) to feel more confident on the stairs (which was rated as just 1/10).

2) to walk up and down stairs in a reciprocal fashion.

His muscle strength was good, and he was confidently able to weight-bear on his prosthesis so long as he

TABLE 1: THE OMS WERE AS FOLLOWS

Outcome measure	Pre MPK trial	Post MPK trial
RNLI	Mean = 51.9% Total score 57.10	Mean = 69.1% Total score 76.0
Falls/stumbles diary	7 falls or stumbles over 7 days	2 falls during the 6 week trial (one due to socket movement on residuum) 4 stumbles during the 6 week trial Nil over last 13 days of trial
PEQ	Ambulation: 28.6% Appearance: 78.6% Frustration: 18.8% Perceived response: 99.2% Residual limb health: 76.5% Social burden: 38.8% Sounds: 51.5% Utility: 69.3% Well-being: 37.7%	Ambulation: **72.2%** Appearance: **98.8%** Frustration: 14.29% Perceived response: 99.2% Residual limb health: 74.5% Social burden: **90.9%** Sounds: **100%** Utility: 69.4% Well-being: **85.2%**
TUAG	14.11 secs (1 stick)	15.52 secs (1 stick due to socket rotation during gait)
2 min walk (up and down corridor	87.6 m (1 stick)	91.9 m (1 stick due to socket issues)
6 min walk (around two cones 6m apart)	170.5 m (1 stick)	166.2 m (1 stick due to socket issues) NB: walked vey quickly for first 2 minutes but then slowed down markedly due to socket rubbing)
Goals achieved		Up/down a set of outdoors stairs with one stick and 1 rail (no partner supervising) Confident to walk up the street without fearing falling Up/down steep slope outside physiotherapy without fear of falls Reduce frequency of falls/stumbles Improve confidence on stairs

was on level ground. The Ossur Rheo XC was chosen for the trial because of the stair-ascent feature.

During the MPK trial, Andrew came in for physiotherapy twice a week, and we worked on strengthening exercises for his glutes, and lots of different exercises to build up his confidence using the yield on slopes, stairs, steps and during stand <-> sit. Alongside this, we worked on equalizing his stride lengths and progressed this by maintaining this symmetrical gait pattern while walking round obstacles and in/out of cones. We also did a lot of work on gradually reducing his reliance on the stick.

Unfortunately, during the MPK trial, Andrew became unwell for > 2 weeks, so with Ossur's kind permission, we deferred his end of trial OM's to give him a full 5 weeks of active physiotherapy treatment. We also ran into socket-fitting problems, despite having reviewed the fit of the socket prior to commencement of the trial. This was likely due to weight-loss (due to being unwell), and more latterly the effects of walking further and faster on the new knee. This meant that during the trial Andrew started to develop some socket discomfort and skin rubs in his groin. (See Table 1 opposite for The OMs)

The subjective scores (RNLI and PEQ) showed some very positive changes, especially in ambulation, social burden and well-being. The TUAG was much the same, but this might be expected if the user sits down using the yield function. The falls diary showed a huge reduction in both falls and stumbles, and this has been maintained because Andrew has had no further falls since the third week of his trial. Regrettably, the timed walking tests did not show the same improvements, but Andrew was in pain when these were recorded (due to his socket rubbing), so this is hardly surprising.

We have already made a number of changes to Andrew's current socket, but none will be adequate in the long-term. The plan is for a new laminate socket with KISS suspension so that we can get rid of the TES belt. The new socket will also have a back-wall cut-out to help with pelvic symmetry in sitting and to help draw the soft tissue into the socket to improve both fit and suspension. We have also referred him to orthotics for footwear and insoles to help restore the third and fourth rocker action in his gait, which are both absent due to the lack of a right big toe.

And for me .... the plan is to continue physiotherapy treatment although at a reduced frequency. Once we have a new socket, then I'll re-do the OM's at his 6-month review and revisit his goals etc. The MPK policy doesn't specifically require this, but for everyone in the team (including Andrew), I think it will be a really worthwhile exercise.

And the moral of the story is ... "never say never". NLW is most definitely the right decision for many of our patients, but always leave an open door so the patient can come back for a review if the situation changes. Andrew's journey from NLW to a Rheo XC has been truly remarkable. His surgery cost the NHS £££'s, but it has truly transformed his life in terms of his mood, his diabetic status, his wounds, and most importantly his ability to care for himself, his partner and his 2 children. Happy days!!

GAIT ANALYSIS: WHAT SHOULD WE DO?

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Following my presentation at the 2019 BACPAR conference, I wanted to take some time to reiterate some of the more pertinent points involved in clinical gait analysis and give those that missed the conference a chance to catch up.

Gait analysis is a minefield and it is often hard to know where to start. There is so much information out there on the best ways to observe and record our findings, it is unsurprising that we might not all look at the same thing?

A study comparing 20 different prosthetists observing 1-person walking found that no two clinicians came up with the same primary observed gait deviation or could agree on the first prosthetic adjustment.

When we look at someone walking, we all focus on different things so it is important that within our clinics we can standardise our protocols. This allows for easy repeatability and means someone else reading your notes will have a good idea of what you saw.

Simple gait analysis – helpful hints

Here are a few simple things you can do to standardise your analysis:

1. Always use the same area in your clinic room to observe gait, preferably somewhere quiet with a neutral background.

2. Try not to give the patient cues and corrections whilst you are observing. Just let them walk at their own natural pace and style.

3. If allowed, video the gait so you can watch it back later to get a good idea of what you are seeing. Slow motion can be very useful here!

4. When taking a video have set places to put the camera, preferably covering the sagittal and coronal planes. This allows easy repeats and takes away perspective error.

5. For better patient engagement, show them the video and point out what you can see. Even better, video it on their phones so they can see their progress during rehab.

6. Apps such as Dartfish and HUDL can be useful to allow you to slow down videos, annotate them and drawn on angles etc. This can be effective for the more tech minded patient who really wants to know what they are doing.

Now we know **how** to observe gait but **why** do we need to do it?

Why do we analyse gait?

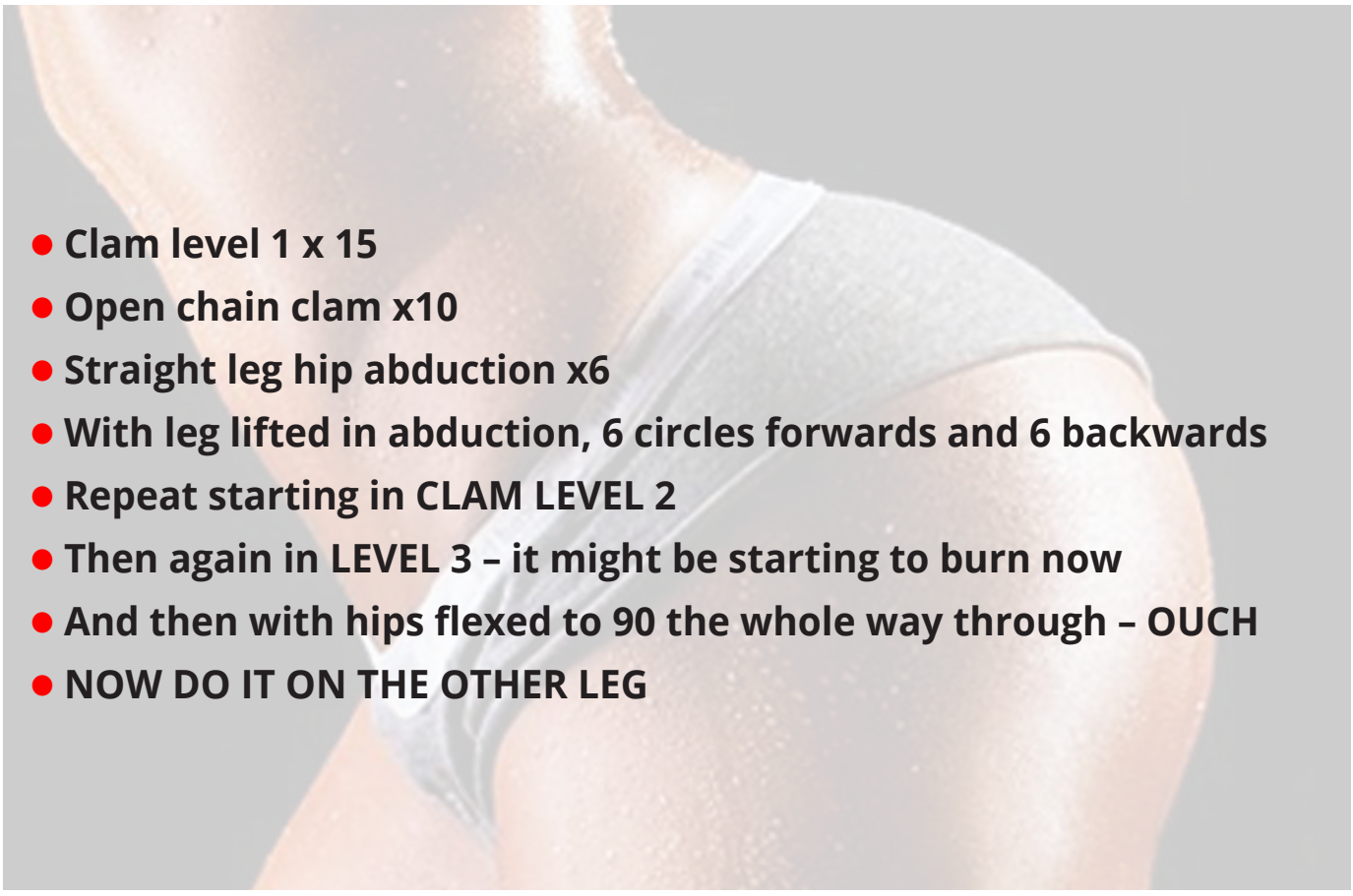
The ultimate aim of prosthetic rehabilitation is to minimise asymmetry and reduce deviations that result in musculoskeletal issues. We all know amputees are more likely to develop early onset osteoarthritis and are more prone to low back pain. Good prosthetic provision and adequate strength and fitness can help to mitigate these problems improving function in life.

Identifying gait deviations will help us understand the underlying problem and focus our assessment and treatment for each patient. If we don't know what we are looking at, our chosen treatment intervention will be ineffective.

The most common causes of gait deviations?

1. *Glutes activation* – or lack of! It is very common for amputees not to be able to contract their prosthetic side glutes. If the glutes don't work, they can't walk properly or hold an upright posture.

2. *Control of hip movement* – strong glutes (maximus and medius) are needed to control your hip during gait. Unfortunately, amputees commonly have flexion contractures at the hip - if they cannot extend the hip, they cannot fire their glutes adequately.



3. *Movement dissociation* – can your patients move their hips and pelvis independent of the rest of the body? Often the answer is no. Stiffness in the trunk, pelvis and hips will translate into an abnormal gait.

4. *Core activation* – a strong core is needed to translate force effectively throughout the body. If the core is weak or underactive it is likely gait will be affected.

I'm sure by now you are thinking, that's all well and good but how do we know it isn't the prosthesis that's causing the deviations? You can check out the height, fit and alignment of the prosthesis, but often you cannot affect a significant change independently, there and then. As a physiotherapist though, it is highly likely your assessment will have highlighted at least one of the problems detailed above, and as such there is always something for you to work on.

Checking out the prosthetic fit

If you want to rule out prosthetic involvement, this is a good place to start:

1. *Height* – a) Check the height from the back. Hands on the iliac crest, thumbs find the PSIS **with your eyes closed** (so that your eyes will not lie to you) With your eyes shut you will get a more accurate idea of height. If your thumbs are level when you look back, all is good!

b) From the front, put your hands on the iliac crests and assess whether they are level. Bear in mind any pelvic injuries.

If there is a height discrepancy try one of two things – check they are not plugging out of the socket or sinking too far in – can they add or remove socks?

If socket fit is good, place small boards under one foot or other and reassess height to confirm whether too long or too short.

2. *Gross alignment* – check anterior/posterior and medial/lateral alignment. Stand in front of the patient, ask them to put their hands on yours, look over your shoulder and march on the spot. When they stop, ask them not to move their feet. This is then their natural unadjusted posture. If the prosthetic foot is not level with the sound side, speak to their prosthetist as the socket needs adjusting.

3. *Listen to the walk*, focus on the foot fall pattern and sound. Is there a heavy heel? Does the foot slap? Are they scuffing the toes? Are there air noises from the socket?

If yes is the answer to any of these then talk to their prosthetist.

Physiotherapy fixes

Now we know how to look at gait and why, how to rule out prosthetic involvement and what the physical causes of deviations commonly are. But how do we fix them?

Start with the simple things - Glutes activation, stability control of hip movement, movement dissociation and core activation.

1. *Glutes* - For those of you who were my willing guinea pigs at the conference you will remember the pain of the **GLUTES BURN**, for those of you who missed out, enjoy the below!!

2. *Hip stability* – in the parallel bars, place a tennis ball under the prosthetic foot. Ask the patient to roll the tennis ball forwards/backwards, side to side and around in circles. Focus on good standing posture and glutes activation on the prosthetic side to hold the correct position at the pelvis.

3. *Trunk dissociation* – sitting on the edge of a plinth, ask the patient to place their hands on their ASIS. These become their headlights. Ask them to point the headlights to the floor and to the ceiling. This can be progressed to lifting up on one side and then the other, drawing circles and figure 8s. Once this is easy, progress to sitting on a gym ball or wobble cushion.

4. *Core strength* – Teach the patient to contract their core muscles in crook lying. Once they have a good grasp of what you mean, an easy progression is to slide one foot along the bed to straighten the leg and bring it back again maintaining core control throughout. Once this is easy, start to lift one leg at a time off the bed to extend it and build the exercise from there.

For further information and ideas on exercises then please see the amputee module on Physiotec. We are building on this all the time so feel free to make suggestions of exercises to add if you think something is missing.

I hope you enjoyed reading this article. If you have any questions or would like to discuss anything with me then please feel free to contact me on ahousley@pacerehab.com.

EDITOR'S NOTE: Anna was the worthy winner of the Presenters Prize at our 2019 Conference.

LEGS4AFRICA GAMBIA REHABILITATION PROJECT – 3 YEARS ON

A CLINICIAN'S PERSPECTIVE

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In the BACPAR Journal Spring 2020 edition, we read about Legs4Africa (L4A), a UK-based charity that recycles previously used prostheses and sends them to Sub-Saharan Africa. Little Legs Coordinator Sue Pownall and Founder Tom Williams told us about its inception 7 years ago and its work in more than 14 countries today. Here is a snapshot of their project in The Gambia, which I gained an insight into during two visits in December 2016 and March 2017.

I started volunteering with L4A in 2016 as a Technical Consultant; supporting the team with clinical advice and developing the information leaflets for amputees. They had a strong working relationship with Prosthetist Gabu Jarjue, who is based at the Edward Francis Small Teaching Hospital (EFSTH) in Banjul. I was invited to go with the team to assess what, if any, rehabilitation the amputees received after an amputation and determine whether the clinicians there needed any support. We spent our time visiting the physiotherapy and prosthetic departments and meeting amputees in the community with L4A Community Support Worker Bubbacarr Jabbie (Bob).

December 2016 – Evaluation Visit

Bob has been working with Leg4Africa in The Gambia since 2013. Frequently amputees are discharged from hospital without any support and are not aware that a prosthesis is an option for them. Bob spreads awareness of the service in the community and travels across the entire country supporting amputees on their journey; taking them to the prosthetics centre, picking up shipments of prostheses and working with Gabu to facilitate prosthetic fittings and repairs. Bob is a huge support for the Gambian amputee community and hosts the Gambian Amputee Association (GAA) monthly meeting at his house. This is a support group that was set up in 2016, with help from L4A.

The Gambia had 4 qualified physiotherapists for the entire population (2 million), all working at EFSTH. Compare this to the UK having over 52,000 physiotherapists and as you can imagine, these 4 clinicians were very busy. There was also a 4 year BSc Physiotherapy programme being run at Banjul University, which was in its 2nd year. Awareness of physiotherapy in The Gambia has been increasing in recent years, however many doctors were not aware of its importance following amputation. Physiotherapy in the acute phase consisted of functional rehab,

From left to right: Gabu, Bob, Morro and myself at the prosthetics centre

The GAA monthly meeting

strengthening and oedema control (residual limb bandaging).

The medical team would refer amputees to physiotherapy on the ward and in outpatients, however this was inconsistent and physiotherapists were unable to see them without a referral. Many were referred either just before discharge or not at all and often were not told about the prosthetics service.

The prosthetics centre is adjacent to the main hospital and serves the entire country. During both visits, Gabu Jarjue was the only qualified prosthetist working in The Gambia along with a technician, Morro. Following an amputation, service users are referred to Gabu from physiotherapy, in the acute stage of their rehab, or from Bob if he sees them in the community. After initial prosthetic fitting some amputees attended gait training with Gabu, but did not routinely receive physiotherapy. It was challenging to travel to the hospital without financial support, particularly from rural areas and many amputees preferred to take the prosthesis straight back home with them. Without the luxury of hospital transport, many could not afford to attend regular physiotherapy. When a service user attended for an assessment with Gabu, they were given a list of materials that were required for the prosthesis. They were asked to buy these and then return to the department so it could be made. The cost of this ranged from 1000-5000 delasi (approx. £20 - £100 at the time of visiting). Prior to L4A donations, this would have been between 45,000 – 75, 000 delasi (£900 - £1,500), which is unaffordable for most Gambians.

A large proportion of amputations in The Gambia are due to diabetes. We also met a few amputees who had a trauma or infection. According to the World Health Organisation (2016), the prevalence of diabetes in The Gambia amongst men is 6.5% and 5.2% amongst women. It is difficult to gain accurate figures however, as it is often undiagnosed. Physiotherapists at EFSTH estimated that 5 amputations were carried out each month, mostly due to diabetes.

Many diabetics in The Gambia are unaware they have diabetes and if develop skin breakdown, wound care is minimal or non-existent in the community, particularly in rural areas. People tend to visit local traditional healers rather than paying for transport to the hospital and often will visit only when the condition has significantly deteriorated. Thinking about how challenging the condition is to manage with the support we have in the UK, it is not surprising that amputation is a common outcome.

Gambians are hospitable, warm and friendly. We were greeted with smiles throughout our trip and the amputees we met were dignified, resilient and resourceful. Most of the amputees we met did not have a wheelchair as these are not readily available - most used crutches for mobility. For those who used a prosthesis, prosthetic socks were rare and often thin stockinettes were used to increase volume. Due to limited materials, prosthetic users had to manage with larger than optimal sockets, torn pelite liners and skin breakdown was a common problem. The sandy environment and insufficient wound care meant that there was a high risk of infection.

Our visit coincided with the GAA meeting, where members gathered in the yard outside Bob's house. After we handed out copies of the new transtibial and transfemoral information leaflets, then came our suitcase full of socks that we had brought with us. Well, such was the demand for socks that this evolved


Workshop participants and presenters

into something of a 'sock clinic'. Myself, Bob and Gabu saw the group members and tried to advise on the appropriate fit, whilst the rest of the team helped people to form an orderly queue! We left supplies of socks for Bob to continue to provide, which was a new addition to his role.

We met Gambians from all walks of life who had had an amputation for various reasons. Alieu, a police officer had a transtibial amputation following a road traffic accident. He uses his prosthesis every day, which has enabled him to return to work as a uniformed officer. Mohammed Sila, a bright and engaged 17-year-old boy needed a transtibial amputation after standing on a glass bottle and developing an infected foot. A prosthesis has enabled him to go to school – he wears it every day, rides a bike and wants to be a doctor or a soldier when he finishes school.

The difficult realities of living in The Gambia were highlighted when I met Pap, a 9-year-old boy who had a prosthesis but sadly his family discouraged him from wearing it. Their income relied on Pap asking for money on the roadside - this was more successful if Pap wasn't wearing his leg and so he wasn't able to wear it as much as he wanted. Mohammed Samasa was a young transfemoral amputee, who has never been able to wear a prosthesis comfortably due to tight hip flexors. He didn't have access to physiotherapy following his amputation and therefore didn't receive essential advice about maintaining hip movement so that prosthetic use was possible.

From the evaluation visit, the main findings were that many amputees weren't referred to physiotherapy and prosthetics after amputation by doctors and that it was difficult for amputees to access rehabilitation before and after receiving a prosthesis – particularly those in rural areas. How could L4A support this?

March 2017

I returned to The Gambia and worked with physiotherapists Penda Sidibeh, Samba Bah, Alfredo Barosso and Gabu and Bob, to organise the workshop 'An Overview of Rehabilitation following Amputation' for the physiotherapy students at the university. The aim was to highlight the prosthetics service and the role of physiotherapy in prosthetic rehab. A member of the surgical team was also invited to present, in order to improve awareness of these services.

Physiotherapy staff and students, GAA members and two surgeons attended. Participants learnt about the role of physiotherapy before and after receiving a prosthesis. Surgeon Dr Muhammed A.Kah presented on the surgical aspects of amputation and Gabu talked about the prosthetics service. There was also a small group activity and a discussion following


Assessing prosthetic fit with Bob

a demonstration of various gait deviations in the amputee participants. As only two surgeons were able to attend, Penda, Samba, Gabu and myself did a summary of the talk at the weekly Surgical Team Meeting – it was hoped this would increase the number of referrals to physiotherapy and prosthetics after surgery.

I also did some training with Penda on prosthetic gait, with two amputees, in order to improve her confidence in prosthetic rehab. I left the department with a prosthetic training checklist, which summarised the basic principles.

It was felt that the main way that L4A could facilitate access to prosthetic rehabilitation in the community was to support Bob. No matter how much training was done at the hospital in Banjul, the barriers to people accessing this were significant – most Gambians couldn't afford to travel to the centre regularly. We needed to somehow bring advice and support to them. A large part of my time on my second visit was spent developing a Community Support Worker Checklist and teaching Bob to use this. Following the evaluation visit, he was now providing socks from L4A supplies. This was to develop further into checking prosthetic fit, teaching basic exercises and checking residual and contralateral limbs.

The training included the basics of the circulatory system, PVD, diabetes, key muscle groups affected by amputation, complications of amputation and signs of infection. We also carried out practical sessions in the community; assessing prosthetic fit and carrying out basic exercises to prevent muscle tightness and weakness.

Bob demonstrating exercises with a transfemoral amputee

Three years on, Bob's checklist is an integral part of his role. He regularly assesses prosthetic fit, provides socks and teaches amputees exercises in the early stages of receiving a prosthesis. He has also become involved with minor prosthetic repairs and carries these out in service user's homes to avoid travel to the prosthetics centre. Distance and finances remain a big barrier to amputees attending physiotherapy in Banjul following prosthetic fitting, however Bob does regular follow-up visits at home afterwards. Here he often progresses them from crutches to no aid as they are able to. L4A have supported 3 more technicians' salaries at the prosthetics centre (two of these women), and funded Morro attending training in Ghana so that he can develop his skills.

In February 2019 Bob helped to start up The Gambia's Amputee Football Team. They started with 4 or 5 players and have developed into a team of 20+ members. In January 2020, 10 GAA members participated in a three-day mental health awareness and peer counselling course, run by GAA members, L4A volunteers and funded by UK Aid. The same month also saw the beginning of the Gambian Female Amputee Partnership group.

Before I knew much about Legs4Africa, I had a few reservations about whether donating resources was appropriate. Would local services become reliant on donations from western countries? Ideally The Gambia would have an independent, reliable and affordable source of prosthetics. However at present, the prosthetic componentry that is required to meet the needs of its people just isn't available. During my visits, it was clear that without Legs4Africa donations, thousands of amputees would not be able to walk.

Although their roots are in recycling used prosthetic legs, Legs4Africa are making collaborations where they can to help current services develop independent resources. They are expanding their activities to include capacity building with the centres they partner with and are currently setting up technician training bursaries for female amputees. Their vision is to see components being made locally through social enterprises that can keep amputees employed and empowered.

I had a wonderful time in The Gambia – it's such a warm and hospitable country. I often felt frustrated in the UK seeing used prostheses being thrown away when there are people that need them elsewhere. Legs4Africa have worked hard to combat this disparity and I feel lucky to have met the people that their work has helped.

References:

World Health Organisation (2016) Diabetes Country Profiles, 2016. Available at: https://www.who.int/diabetes/country-profiles/gmb_en.pdf?ua=1 (accessed 7/5/2020)

PROFILE PAGE: WORKING WITH AMPUTEES – AN OT'S PERSPECTIVE

Helen Wilkins
Occupational Therapy Team Lead. John Radcliffe Hospital, Oxford University Hospitals Foundation Trust

I'm the OT Team lead for Vascular and Emergency Surgery at John Radcliffe Hospital, Oxford. Prior to vascular, I worked in community learning disabilities, acute general medicine, trauma, surgery, and paediatrics.

Specialising in vascular was not something I had initially considered. However, several years ago, due to team and staffing changes, I found myself working with amputees which sparked my interest. In 2013 I secured my current Band 7 role, and so my work with amputees continued. Additionally, I have been studying part time at Southampton University towards the MSc in Amputee Rehab and Prosthetic Use.

Our vascular unit is the hub across Oxfordshire, Berkshire, and Buckinghamshire. I co-lead the therapy team with my Physiotherapy counterpart in a fully integrated OT and Physiotherapy team. We are fortunate to have a close, supportive working relationship with the ward, and good links with the local wheelchair service and prosthetic service.

As an OT I explore how an amputation affects someone and how to help them become 'them' again. Therefore, I consider the physical, psychological, and cognitive aspects; also occupation (ADLs, work, leisure) and the environment (physical, social, and cultural/values)*

Within the acute setting much of my work is aimed at safe discharges. This includes: establishing safe transfers; wheelchair management; dressing practice to normalise daily routine, promoting independence and adjusting to a new body image; kitchen assessments for wheelchair use within the environment and engaging in a normal daily activity; cognitive assessments; goal-setting for on-going rehab; assessing for and providing equipment; and recommending care packages.

I also undertake access visits within Oxfordshire for new amputees. These explore wheelchair access and help identify changes required to facilitate safe discharges home. Sometimes the biggest challenges can be managing expectations of new amputees and/or families, especially with discharges directly home from an acute setting. However, access visits can also provide a good opportunity to meet with relatives who can feel more comfortable in their own homes in discussing what has happened to their loved ones.

I feel privileged to follow new amputees through such a life-changing procedure. I enjoy seeing them progress from being at their most vulnerable immediately pre and post-surgery, through to increasing their independence.

● Based on the Canadian Model of Occupational Performance and Engagement CMOP-E

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