**UPDATE**

AGM Summary
Regional study days

**BE INSPIRED**

Implementing outcome measures
Research

**LEARNING**

Course & conferences
Teaching abroad


# BRITISH ASSOCIATION OF CHARTERED PHYSIOTHERAPISTS IN AMPUTEE REHABILITATION

SPRING 2019 **ISSUE 51**

ottobock.

# Compression Shrinker Socks

## Post-operative Residual Limb Care

**Our residual limb Compression Shrinker Socks are an important complement to post-operative residual limb care.**

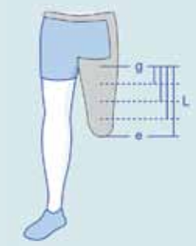
Available in two compression classes, they are available for transfemoral and transtibial patients and in various sizes to meet individual patient requirements.

Compression Shrinker Socks ensure constant pressure on the residual limb in order to prevent post-traumatic swelling, improve circulation as well as offering patients a high level of wearer comfort.

### Benefits

- Two compression classes available for vascular and non-vascular patients
- Low-cost and effective early care for the residual limb
- High level of wearer comfort and easy handling
- Good fixation of soft tissue and rapid dissipation of tissue swelling
- Can be used to prevent post-traumatic swelling after amputation
- Even compression
- Silicone grip band prevents sock from sliding down (TT)
- Breathable

### Transfemoral




**Compression class selection**

Compression Class 1* 451F12

*CCL1 - Mild compression recommended for vascular patients

Compression Class 2* 451F11

*CCL2 - Moderate compression recommended for all other patients

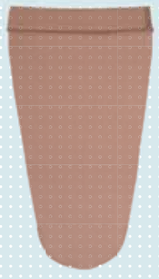
**Size Selection**

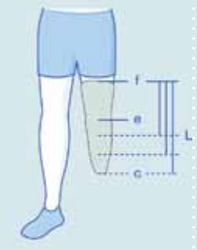
| Size | Circumference (g) | Circumference (e) |
|---|---|---|
| XS | 41-44 cm | 29-31 cm |
| S | 44-48 cm | 31-34 cm |
| M | 48-52 cm | 34-37 cm |
| L | 52-56 cm | 37-40 cm |
| XL | 56-60 cm | 40-43 cm |
| XXL | 60-64 cm | 43-46 cm |

**Length Selection**
Length (L)=g-e: 20,25,30,35 cm

**Order Example**
451F12=XS-20

### Transtibial






**Compression class selection**

Compression Class 1* 451F13

*CCL1 - Mild compression recommended for vascular patients

Compression Class 2* 451F10

*CCL2 - Moderate compression recommended for all other patients

**Size Selection**

| Size | Circumference (g) | Circumference (e) | Circumference (c) |
|---|---|---|---|
| XS | 39-41 cm | 29-31 cm | 27-29 cm |
| S | 41-44 cm | 31-34 cm | 29-32 cm |
| M | 44-47 cm | 34-37 cm | 32-35 cm |
| L | 27-50 cm | 37-40cm | 35-38 cm |
| XL | 50-53 cm | 40-43 cm | 38-41 cm |
| XXL | 60-64 cm | 43-46 cm | 41-44 cm |

**Length Selection**
Length (L)=f-c: 30,38,46 cm

**Order Example**
451F13=XS-30-N

To order, email **bockuk@ottobock.com** or for more information call us on **01784 744900**.

**www.ottobock.co.uk**



# CONTENTS



BACPAR

CHARTERED SOCIETY OF PHYSIOTHERAPY

# GOOD THINGS HAPPENING!

**Julia Earle**

**BACPAR Chair**

**Clinical Specialist Physiotherapist in Amputee Rehabilitation**

Gillingham DSC
Medway Maritime Hospital

bacpar.chair@gmail.com

## CHAIR'S MESSAGE. SPRING 2019

So many good things happening in the BACPAR / amputee world, I hope you enjoy reading about some of them in this Journal edition.

A big thank you to Sue Lein and Mary Jane Cole for taking on the role of Journal Editor from Jodie who I'm sure we all agree did a great job. I'm very pleased that we have taken on the additional support of Numa in formatting the journal and I hope this will make their job a lot easier in the long run.

We have just had our March exec meeting, as always it was a busy and productive couple of days, and it was great to welcome some new exec members to the meeting.

We have a few new ideas in the pipeline around an additional bursary pot and changes to our constitution around membership (see piece 'Professional Network Changes') which we will bring to the AGM in November for discussion with the membership. As I said at our last AGM our membership numbers have increased by 37% over the last 4 years, which is amazing when other professional bodies are reducing in numbers, and let's hope with the future PN membership changes we can welcome even more into the fold!

The other big bit of work at the March Exec is always around planning this year's conference and there were no shortage of ideas and volunteers which is so encouraging. Although at the November AGM the membership agreed to a 1 day conference, it was decided to plan a 2 day one as there had not been a great deal of take up for the TIPS / ISPO / BACPAR event for various reasons. Thank you to all those involved in the planning.

Keep an eye on the BACPAR members only Facebook group, iCSP and the website for more details on all of the above as they become available.

All the best for 2019.

Julia Earle





# WELCOME

## EDITORIAL

**Mary Jane Cole**

**Joint Journal Officer**

bacparjournal@gmail.com

**Sue Lein**

**Joint Journal Officer**

bacparjournal@gmail.com

Welcome to the Spring 2019 BACPAR Journal. We are new to the Editor role and have been on steep - but enjoyable - learning curve over the last few weeks. They say there's no better way to learn about technology than to use it in real life.....!

This edition starts at last November's conference and AGM in Wolverhampton, working through to the recent Executive Committee meeting in March 2019. We hope you enjoy reading it...

We want to say a huge thank you to the previous Editor Jodie- and her husband Pascalis with all his technical expertise - for all their help in the handover period.

We are aiming to produce a web version of the Journal as well as a paper one this time round and are working with our new formatter with us feeling as if we are learning a new language!

Don't forget we are always looking for interesting content – case studies, research, service improvements, feedback from and reflections on courses & conferences, posters etc. etc. Even poetry and painting if you wish! The BACPAR Journal gives members – and our colleagues, including students (on placement or pursuing post graduate study) – the opportunity to showcase and share many examples of amputee related experiences from which we can all learn.

Please find some guidance notes below:

DEADLINES for the biannual Journals (Spring and Autumn) will be announced via iCSP, and our 'BACPAR Members Only' Facebook page

CONTACT the Joint Journal Officers Mary Jane Cole / Sue Lein via email: BACPARjournal@gmail.com

WORD COUNT: The approximate word for major articles is 2000 words, or 1500 words if you have the addition of figures and/or tables, photos and references.

LAYOUT: Please add your name, your role and where you work under your article title

PICTURES should be supplied as high resolution (300dpi) jpegs or PDFs as images. They should be emailed as separate files not ready embedded in your text

TO ACCOMPANY YOUR SUBMSSION you will need to supply completed Journal Article Submission Form and Image Consent Forms (if applicable). We will supply these.

Best wishes and happy reading!

Sue and Mary Jane

# BACPAR CONFERENCE

## WOLVERHAMPTON 2018

**Abi Aston**
**Prosthetic Physiotherapist**
**Guy's and St Thomas' NHS Foundation Trust**

As a first-time attendee at the annual BACPAR conference, I wasn't quite sure what to expect. Would the content be stimulating, even inspiring? Take a read and see what you think!

After being warmly welcomed by BACPAR Chair Julia Earle, Amanda Thomas from the Royal London Hospital kicked off the first session. Her opening question to the audience was 'Who has exercised today?' which she then followed with compelling evidence that exercise reduces the risk of mortality and long-term conditions: the risk reduction is up to 30-50% pre-diagnosis of colon and breast cancer. Having a high BMI is 'inflammatory' and chronic inflammation is associated with an increased risk of cancer. The benefits of exercise include reducing inflammation and boosting the body's immune system pre-diagnosis.

Less research has been done on exercise post-diagnosis, but there is evidence of significant effects, for example in well-being, neutropoenia and body composition: exercise also helps to counter many of the cancer treatment side effects. The takeaway point was that repeated exercise at moderate intensity, for 150 mins per week, with strength training 2-3 x a week is the optimum.

Dr. Elizabeth King from New Cross Hospital, Wolverhampton talked through a number of models for assessing frailty, discussing how frailty is a combination of social frailty, physical frailty (including co-morbidities), and mental health. As a person becomes more affected by each of these three areas, they become more vulnerable to a stressor event (even something as simple as a medication change), take a longer time to recover, and their baseline function reduces. She believes it is important to look at the context of people's general decline when they are admitted as an inpatient, aware that often when there is a significant event e.g. a fall, this leads to a 'turn'. She discussed the challenges of predicting whether frail people have rehabilitation potential due to them starting with a low baseline and is keen to see more pre-habilitation before elective surgery for frail patients. She suggested the 3 things that affect whether rehab is successful are motivation, rehab goals and stable long-term conditions. In response to questions from the audience, Dr King suggested the Edmonton Frailty Score provides a holistic assessment and outcomes which lead to plans for what to do next, and Prisma 7 as a screening tool for patients who might benefit from further assessment for pre-rehabilitation, where that is an option.

After a coffee-break, Simon Hanna gave us a quick rundown on evidence-based exercise in later life, answering the question 'How much is enough?' The Chief Medical Officer's exercise guidelines are about to be relaunched and the emphasis is going to be on the importance of strength training as a priority over cardiovascular exercise: it is the accumulation of exercise that leads to change, taking 6 -12 months before permanent changes are made that lead to a reduction in falls. Programmes need to be progressive, increasingly challenging, and based on 10 repetitions to failure. Every time the OTAGO programme is researched it is found to be effective, but according to research used by Public Health England, there is a greater return on investment using FaME versus OTAGO. The dynamic of group exercise is more effective than individual exercise. The following resources were recommended: www.laterlifetraining.co.uk, www.foreveractive.org.uk and www.cambridgeshire.gov.uk/be-well/your-health-and-wellbeing/stay-stronger-for-longer



Dr. Suzanne Carson, Consultant Clinical Psychologist, then talked through the psychology of trying but not succeeding with a prosthesis. She believes that a lot of our role in rehabilitation is to empower people to tap in to their own resources and reassure them that what they are feeling is normal. She discussed the benefits of trialling an early walking aid and talked through the importance of 'supported failure' - how it might feel for a patient to 'fail', and how this might play in to their context of previous grief experiences. She encouraged us to watch out for negative language, remembering that the language we use will affect our own perception of the patient and what the patient and family 'hear' and 'listen to'. She encouraged us to ask patients more questions to understand what is difficult for them in the 'here and now' and not to presume we know. By our questions, we can get a window in to their life and hear what is important to them. As a practical tip, she recommended using diaries which could be used to both reflect and use in goal setting sessions. Suzanne encouraged us to think about what failure really is: Is it about the team or the patient?


*Dr Fiona Davie-Smith gives an update on SSPS*

After a tasty lunch, Danni Pennacchia (PT) and Paula Wilkinson (OT), from North West Anglia NHS Foundation Trust talked through current pain theory, which centres around a person's perception of threat. This can be influenced by many factors including previous experiences, expectation, mood, beliefs, genetics, cultural factors. Pain will not improve if these factors are not considered in pain management. They then talked through the physiology of Chronic Regional Pain Syndrome (CRPS), the CRPS Budapest Diagnostic Criteria, and the power of body perception disturbances. The talk prompted much discussion with the audience regarding a holistic management approach to CRPS. Controversially, a number of therapists reported that some carefully-selected patients having found benefit from amputation.

One of the highlights of the conference was opportunities to network with other physiotherapists and a range of businesses related to amputees and prosthetics as well as a charity many of you may be interested in - 'Legs 4 Africa' - who ensure that the component parts of prosthetics get recycled and used by under-funded prosthetic services in Africa. It was interesting to note that the sustainability aspect of componentry is not currently a priority: I expect this will change in the years to come.

Friday morning started bright and early with Morten Tange, from Denmark. Morten and his team have developed an easy-to-use, valid, reliable, outcome measure that can be used in the acute stage post amputation, by any member of the MDT, to assess people's independence. The Basic Amputee Mobility Score (BAMS) assesses a patient's independence in completing four functional tasks that are part of normal rehabilitation. Each task is scored out of two, with a maximum score of 8. The score gives an overview of progress and can be used as a focus for rehab and goal setting: they do not yet know if can be used as a predictor for prosthetic use. The tool and manual can be found for free online. Feedback

from the audience was that having a BAMS score has been a very useful tool to assist with patient handovers between staff members.

Adam El-Sayed, Social Media Office for BACPAR shared his thoughts on the challenges and benefits of social media. The benefits include providing a place for people to stay up to date with events, projects, provide peer support to each other and network. He encouraged BACPAR members to sign up to engage with the social media that BACPAR uses, including our closed Facebook group. He directed us to the HCPC recommendations on how to use social media thoughtfully, as professionals and is happy for anyone to contact him for further advice or information: BACPAR.socialmedia@gmail.com

Trudi Dunn then led a talk on 'The Power of Health Coaching'. She asked, 'how much of our work is about trying to change patients' behaviour?' and 'how much training are we given in this?' Physios are renown for being 'fixers' rather than 'enablers!' Are we failing our patients? Considering our ageing population and the number of people that are managing multiple long-term conditions, we need to think about how we can help people help themselves. NHS England are promoting 'Patient Activation'; there is a lot to be gained for the patient, the clinician and the return of investment for the NHS. Health coaching is well evidenced; research and advice can be found at www.betterconversation.co.uk. This led to an interesting discussion about teaching undergraduate therapists about self-management, the importance of health coaching in the primary care setting and the need for a cultural shift toward empowerment.

These conversations led neatly in to the next presentation given by Caroline Griffiths, who is chair of the professional network 'Chartered Physiotherapists in Mental Health' (CPMH). CPMH have partnered with a number of groups to launch a CSP resource leaflet to support therapists in their treatment of people with mental health conditions. (For those who are interested, there is also CSP learning disability publication). Caroline wants physiotherapists to believe they have all the skills they need to support mental health in our patients, that it's 'business as usual.' Caroline gave tips on how to feel more confident including making sure we read notes thoroughly, planning, using our listening skills and being flexible about the service we offer.

Dr. Fiona Davie-Smith who leads the Scottish Specialist Prosthetic Service then talked through an update of their service and the eligibility criteria and outcome measures they use for MPKs, Hydraulic foot and ankles, multi-articulatory hands, and sports limbs.

*Interactive session with winner of the Presenter's Prize, Simon Hanna.*

Pre-lunch the BACPAR Guidelines Working Group reported on the updating of the Prosthetic Guidelines as part of our NICE accreditation. There was a request for feedback regarding the current guidelines including feedback from User Groups, information on re-audits, new research articles and volunteers for the Delphi process (consensus by expert opinion, where there is no supporting literature).

*Mr Michael Parry presenting x-rays as part of his talk on "Sarcoma- A Surgeon's Perspective'*

Friday afternoon kicked off with a fascinating presentation by Mr Michael Parry, from the Royal Orthopaedic Hospital in Birmingham: Sarcoma: A Surgeon's Perspective. In the early 1970s, osteosarcoma was terminal, but survival now is 60-70%. Where limbs used to be sacrificed, in many cases they can now be salvaged. In the majority of cases endo-prosthetic replacement is used, and children are given extendable EPRs. Other surgical options include rotationplasties, irradiation and re-implantation (though this is 'out of vogue' now) and osseointegration.

The paediatric theme continued with a case study from a physio and OT from UCLH, on a girl from the British Virgin Islands. They discussed ways of maintaining engagement and motivation when providing rehab for children who are long-term patients. Their suggestions included group sessions, child-led therapy sessions, setting challenges e.g. 'the wobble-board challenge' and community-based activities. They emphasised that when providing therapy for with children, we have to become what they need us to be.

The challenges of treating a child with emotional struggles was investigated further through a Scottish case study of a 10-year-old girl with a rotationplasty. Rehabilitation had included learning how to manage the child's anxiety, physical hypersensitivity, and integration at school. There were discussions involving the audience around counselling and coaching options for children. One interesting suggestion from a mental health specialist was to consider a CBT approach – asking the child 'What are your fears? What is the worst that could happen?'.

An inspiring end to Friday was watching a live case study of a man with a hip-disarticulation. His case history included use of the BLARt tool to predict his use of a prosthesis, the value he found in being connected with another patient who had had a similar operation, a counsellor, an early home visit and early communication with the GP about the patient's neuropathic pain medications. Louise Tisdale talked though a number of exercise ideas, how goals had been set using the Rivermead method and how the PEQ had been used for assessment. Incredibly, we were told that the later stages of rehab had included use of the BOSU plus Therabands above his head! This man's main challenges had been phantom limb pain, outdoor walking and sitting down with a prosthesis. He was looking forward to trialling a Helix Hip and C-leg. Louise was going to keep him working on a strong, flexible and stable trunk.

The 2018 BACPAR Conference was varied and inspiring. It's wonderful that BACPAR is full of such motivated therapists, passionate about their patients and prosthetics!

# SUMMARY OF BACPAR AGM 2018

## THIS YEAR'S AGM WAS HELD AS USUAL DURING THE BACPAR CONFERENCE ON THE 15TH NOVEMBER 2018.

**Julia Earle**

**BACPAR Chair**

**Clinical Specialist Physiotherapist in Amputee Rehabilitation**

Gillingham DSC
Medway Maritime Hospital

bacpar.chair@gmail.com

The full AGM minutes can be found on the BACPAR website: https://bacpar.csp.org.uk/documents/2018-agm-minutes-and-report

75 members were present and apologies received from 1.

Minutes of the Previous AGM were agreed.

**Matters arising:**

• The Closed Facebook group is now up and running and has 101 members so far – members were encouraged to join up if they hadn't yet.
• As agreed at the AGM last year a joint meeting with TIPS/ISPO/BACPAR is planned and the ISPO/BACPAR content will be on 22-23rd March 2019.

## CHAIRS REPORT

An extensive list of BACPAR's achievements against our work plan is included in the full AGM minutes but a few of the highlights were mentioned:

• Research Officers have written Research Bursary Guidance (on iCSP) to give ideas how members might use the £3000 available in developing a research project for example.

• Educational bursaries have gone to 4 members this year – members were encouraged to apply, especially for joint conference next year.

• BACPAR continues to support M level course in Southampton (University) as an Initiating Stakeholder. The MSc has now been changed and fully approved as a standalone MSc Programme. This is viewed as an important achievement and endorsement of the programme. The title of the programme is 'MSc Amputation and Prosthetic Rehabilitation'.

• South Central (Portsmouth DSC) pilot of the use of the SPARG DSF (discharge summary form) started 1st January 2016. Bournemouth also to start collection.

• National Amputee Prosthetics Outcomes Registry (AMPROM) is in final stages of development and was presented at the ISPO meeting in October. This will be iPad based tool for recording of outcome measures, developed in response to the MPK pathway (but can be used more widely). ISPO will be funding an iPad for each centre and data will be stored anonymously in an open access online resource and managed by Southampton Uni.

• Membership went up from 226 to 247 this year with 49 new members this year. There has been an increase in 37% in the last 4 years.

• CSP now changed capitation fees – BACPAR used to get a small amount back from CSP for every CSP member. This is now changing to a central fund which we as a Professional Network can apply to for specific purpose. Details are still being decided.

Helen Scott provided the membership with an update from SPARG concerning their membership, data collection, conferences and made a plea for BACPAR to continue to have the SPARG Rep role within the EXEC.

Details of the accounts were presented by Sue Lein, Treasurer.

## QUESTIONS ASKED OF THE BACPAR MEMBERSHIP DURING THE 2018 AGM

In light of the BACPAR / ISPO meeting in March 2019 the membership was asked if they would like a 1 day or 2 day conference in 2019, in view of a joint event with ISPO TIPS 2019. 43 members voted for a 1 day event. 30 members voted for a 2 day event. It was agreed therefore to run a 1 day study day in November with the AGM.

The Membership was asked if members had any ARC Motions to be submitted, or if Members wished to attend using BACPAR's 2 free spaces. Response- No ARC Motions offered. No requests to attend ARC. Any wishes to attend should be directed to Julia Earle. Deadline for submission is 4th March 2019.
The Membership was asked if any members would like to volunteer for the Lead Regional Rep Role in view of Kate Connolly being on Maternity leave. There were no offers for this.

The membership was asked their opinion on receiving a printed copy of the journal. The membership was somewhat undecided (17 for printed, 14 for online only and rest undecided) and have requested the exec explore the option of an "opt in to printing" this would be specified on the membership renewal form.

The membership was then prompted to complete GDPR forms otherwise they may not be sent the journal and to update their details when renewing membership.

## ELECTIONS

• Naheed Ahmed was elected as iCSP Facilitator, and with the task to develop the post, with the PROs, to offer increased social media presence and support.

• Sarah Bradbury and Adam El-Sayed were elected as Education Officers in a shared post.

• Rachel Humpherson was elected as Guidelines Coordinator (Sara Smith will also continue in the role until the current guidelines are completed).

• Chantel Ostler and Dr Fiona Davie-Smith were re-elected as Research Officers (second term).

• Mary Jane Cole and Sue Lein were elected as Journal Officers in a shared post.

There was no AOB raised.

If you have any questions about the AGM or the report please see the full minutes on the BACPAR website, if they are still not answered of course contact me via bacpar.chair@gmail.com

# CHANGES ARE AFOOT FOR THE PROFESSIONAL NETWORKS

**Julia Earle**
**Bacpar.chair@gmail.com**

There have been several changes in the CSP governance structure recently and they have been modernising their processes, one of these is are changes in the Professional Networks (PN's) structure.

This started by changes in funding; in the past BACPAR could claim back an amount of money from the CSP for every CSP member on our books, called capitation fees. Unfortunately this was not being claimed by many of the PN's so the CSP have been working with the PN's to develop a funding process whereby PN's can apply for funding for specific pieces of work of benefit to its members. For a small PN such as BACPAR is a shame as it will mean a reduction in regular income but there is a larger pot of money (£3,000, £5,000 or even £10,000) we can apply to. 2019 will be the first year during which the agreed process is trialled and it will be evaluated by the CSP and PN's, and changes may be made to the process over time. At the March exec meeting we agreed BACPAR would apply for funding towards our current guidelines update work on the next submission date in September.

The other big change is that the CSP felt that the formal affiliation process and agreement between the CSP and PN's, which has been in place for decades, was overly bureaucratic and labour-intensive process for all parties.

The CSP have therefore said that they want the PN's to be much more autonomous which will have a big impact on how we organise ourselves. This had not been discussed with the PN's and came as rather a shock and as an Exec we are just starting to think about how this will impact on us.

We will still get many of the benefits from the CSP such as hosting the website, iCSP and our engagement activities but it also means that we don't have to abide by the old PN handbook. One real bonus is that we can write our own constitution and this can include that we can now accept into membership those that are not CSP members (or members of another professional body) which will mean we can accept the therapy support staff that we used to have to say no to! It also means that we don't have to report back to the CSP in the same (very lengthy) way. Of course we still need to be accountable to our members as far as finances and reporting on our work against our objectives, but don't have to be inline with the CSP objectives any more.

If you have any questions about the detail of these changes please do email me.

# OUR EXPERIENCES OF THE BASIC AMPUTEE MOBILITY SCORE (BAMS) IN SHEFFIELD

**Gill Atkinson**
**Mobility and Specialised Rehab Centre, Northern General Hospital, Sheffield.**

Lou Tisdale sent us an email on behalf of BACPAR at the beginning of 2018, about a new outcome measure specifically for inpatient (IP) amputees, suggesting that we have a look and try it out. The BACPAR study day in May2018 about outcome measures with Bob Gailey as our guest speaker, was coming up, so we could use that as an opportunity to discuss our experiences then.

The article, "Development and psychometric properties of the Basic Amputee Mobility Score for use in patients with a lower extremity amputation" (2018) was written by Morten Kristensen, a researcher and physiotherapist from Denmark. We read the article, and our first impression was that it seemed completely relevant to our inpatient amputees following amputation, easy to understand, easy to use and easy to document (google the article title – and Epidemiology clinical practice and health – and you go straight to the article).

Anna, our Technical Instructor, put together and printed off a simple record sheet with 7 columns: the date, numbers of days post op, one for each of the 4 parameters being assessed, and the total BAMS score. We printed one off for each of our new IP amputees. At the end of each day, co-ordinated by Anna, we would document an individual's score for each parameter and the total score. We collected our first set of data at the beginning of February 2018 and by October 2018 we had 50 sets of data.

Why did we like it? It is a simple scoring system that is not ambiguous. It does not involve any extra work, simply documenting the score from what we have observed that day. At a glance, it can be easily seen how quickly someone is progressing, or not. It also highlights those with low scores, and helps target their rehabilitation. We are a small team of physios, and often a patient is treated by a different therapist each day. However a quick glance or discussion about their BAMS score can tell us a lot of information about how someone is managing functionally. As the functions being scored (bed mobility, transfers and wheelchair skills) are those required for independent living, a higher score helped us focus on a when a patient was almost complete for discharge from a therapy perspective.

It was wonderful to have the opportunity to meet Morten at the BACPAR Study Day in November 2018 and hear more detail about the BAMS. We are continuing to use the BAMS as the outcome measure for our in patient amputees and would encourage others who haven't yet done so, to give it a try.

**References**

Kristensen, M.T et al. 2018. Development and psychometric properties of the Basic Amputee
Mobility Score for use in patients with a major lower extremity
Amputation. Geriatric Gerentology International. 18: 138.145.

# Exploring Beliefs and Experiences of Amputees and Physiotherapists Toward Phantom Limb Pain Management

Saxton, G. MSc Physiotherapy and Phillips, G. School of Clinical and Applied Sciences, Leeds Beckett University, Leeds, UK, LS1 3HE
Email: g.saxton9862@student.leedsbeckett.ac.uk

## Introduction

- Phantom limb pain (PLP) can be a debilitating complication of amputation (Bjorkman *et al.,* 2012) affecting 72-79% of amputees (Richardson *et al*., 2006; Ehde *et al.,* 2000)
- Minimal evidence exists regarding either pharmacological or non-pharmacological management of PLP (Alviar *et al.,* 2016; Batsford *et al.,* 2017)
- However, physiotherapists have been identified in playing an integral role in PLP management (Tapp *et al.,* 2012; Hanley *et al.,* 2006)
- The aim of this study was to explore the experiences and beliefs of both clinicians and amputees regarding PLP to help support the development of clinical guidelines.

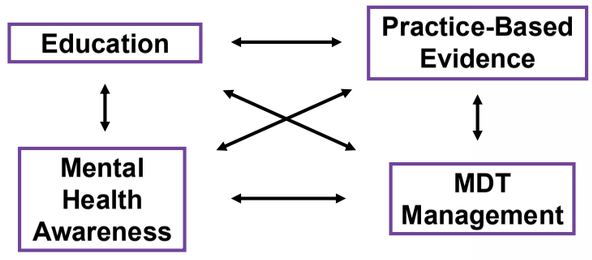
## Methods

- An inductive, qualitative approach using semi-structured, telephone interviews
- Physiotherapy participants (n=6) were recruited via clinical interest group BACPAR
- Amputee participants (n = 13) were recruited from across the UK. The majority lower limb amputees (n=12)
- Interviews were recorded and transcribed verbatim. Transcripts were checked by all participants to limit bias
- Thematic analysis was used to identify themes and sub-themes within the subjective data

**References**
Alviar, M.J.M. Hale, T. Dungca, M. (2016) Pharmacological interventions for treating phantom limb pain. **Cochrane Database of Systematic Reviews** [Online], 10. .
Batsford, S. Ryan, C.G. and Martin, D.J. (2017) Non-pharmacological conservative therapy for phantom limb pain: A systematic review of randomized controlled trials. **Physiotherapy Theory and Practice** [Online], 33(3), pp. 173-183.
Bjorkman, B. Lund, I. Arner, S. Hyden, L. (2012) Phantom phenomena – Their perceived qualities and consequences from the patient's perspective. **Scandinavian Journal of Pain** [Online], 3(3), pp. 134-140.
Ehde, D.M. Czerniecki, J.M. Smith, D.G. Campbell, K.M. Edwards, W.T. Jensen, M.P. Robinson, L.R. (2000) Chronic phantom sensations, phantom pain, residual limb pain, and other regional pain after lower limb amputation. **Archives of Physical Medicine and Rehabilitation** [Online], 81, pp. 1039-1044.
Hanley, M.A. Ehde, D.M. Campbell, K.M. Osborn, B. Smith, D.G. (2006) Self-reported treatments used for lower-limb phantom pain: descriptive findings. **Archives of Physical Medicine and Rehabilitation** [Online], 87(2), pp. 270-277.
Richardson, C. Glenn, S. Nurmikko, T. Horgan, M. (2006) Incidence of phantom phenomena including phantom limb pain 6 months after major lower limb amputation in patients with peripheral vascular disease. ***Clinical Journal of Pain*** [Online], 22(4), pp. 353–358.
Tapp, T. Beckett, F. Horne, S. Donovan-Hall, M. and Cole, M.J. (2012) **Exploring the approach of physiotherapists in relation to current practice in the educative treatment of lower limb amputees with phantom limb pain** [Online]. British Association of Chartered Physiotherapists in Amputee Rehabilitation.

## Findings

### Main Themes




**Education**

- PLP education was viewed as important by physiotherapists, yet many amputees had not received formal education and were instead educated by their peers
- Many amputees felt physiotherapists did not prioritise PLP, this was echoed by physiotherapists who perceived PLP lower on an amputee's problem list

**MDT Management**

- Physiotherapists acknowledged that MDT management is effective. However, the physiotherapists' role is potentially overshadowed as many amputees were unaware physiotherapists had a role within PLP management:

*"It's difficult to imagine what a physiotherapist can do. They can only really do exercises and massage."* [A1]

### Physiotherapists' Key Terms


**Practice-Based Evidence**

- Due to a lack of evidence-based guidelines, practice-based evidence was utilised not only by physiotherapists but amputees as well to cope with PLP
- Self-management, individualisation and using treatments in conjunction were identified as key factors to effective management.

**Mental Health Awareness**

- Amputees indicated the importance of physiotherapists recognising the mental health impact of PLP:

*"And I think that's really, really important that the amputee finds a physio that, not only, can they share with because a lot of this stuff is really deep."* [A3]

- Physiotherapists recognised mental health issues as a factor increasing the difficulty of PLP management.

## Implications for Practice

- PLP education tailored to an individual's psychological state and focused on the "normalisation" of PLP to reduce anxiety.
- Acknowledgment of PLP when setting patient-centred goals to guide rehabilitation.
- Encouraging self-management and individualising rehabilitation.
- Raising awareness among amputees of the physiotherapists' role in PLP management.
- Raising awareness among physiotherapists of the mental health aspect of PLP and the potential benefits physiotherapy can provide.

# BACPAR AT TIPS/ISPO/ BACPAR CONFERENCE

## MARCH 2019 – THE LOWRY, SALFORD, MANCHESTER.

**Louise Tisdale**
**BACPAR Vice Chair**

I attended this conference with two hats on; one as someone involved in the programme development on behalf of BACPAR and secondly as a delegate.

Fiona Davie-Smith and I volunteered to liaise with the TIPS and ISPO conference planning team to develop a programme of interest for BACPAR members. A call for subtracts went out after the BACPAR 2018 conference when the membership agreed to support March's joint programme.

Three excellent BACPAR submissions were received and all made it onto the programme. Thanks to Dan Easton - Partner at Leigh Day solicitors - who on Friday afternoon presented an excellent overview of how our clients can make the most of compensation and rehabilitation that is offered as part of this process.

Helen Scott submitted an abstract on the development of the Running Class at Westmarc – which, because of Helen's leave, was presented beautifully on Saturday morning by Joanne Hebenton (whose attendance was supported by a BACPAR bursary) and Grace Ferguson – Master Pilates Instructor (she of BACPAR 2017 Conference) – unsurprisingly they were the winners of a conference prize. The three BACPAR presentations were given longer slots of 30 minutes to ensure that the audience got as much out of each as was possible.

And last, but by no means least, Saturday afternoon saw a presentation from Carolyn Wilson (BACPAR Ireland Rep) entitled 'The Timed Up and Go Test: An audit of TUG scores for Lower Limb Prosthetic Users Within a Clinical Environment', the conclusion of which was to develop some normative values for differing amputation levels, aetiology and sex. A publication of the bigger project is imminent.

The compendium of all the Conference abstracts can be found at: https://www.ispo.org.uk/resources/Compendium---Final-Copy.pdf

Fiona and I chaired a session each of the ISPO/ BACPAR part of the conference. The Blatchford's Lecture – 'Advances in Prosthetic Rehabilitation Evidence-Based Practice with Clinical Outcomes' from Friedbert Kohler sat within Fiona's session and he actually referenced work from her PhD.

There was an Attendee Hub App that supported the conference which was an excellent pre-event product enabling delegates to organise their schedule and also message other attendees (if they had downloaded and the app and activated their presence upon it). I made the most of this to organise our lunchtime meet ups (along with the BACPAR Members Facebook page). BACPAR members numbered 16 in total across the two days.

The Quays theatre (with seating for 440) in which the podium presentations were given, was a good one from a delegate's perspective – but as someone on the stage - and particular as a presenter – it was difficult to see the audience to respond to questions and engage fully with them.

Overall the event was a good one from my perspective ( and we may hear others' views on this conference in the Autumn Journal..), however I love BACPAR Conferences and I look forward to seeing you all in Wolverhampton on the 14th and 15th November 2019.

# Minimal change in the oedema management approach for transtibial amputees despite the evidence

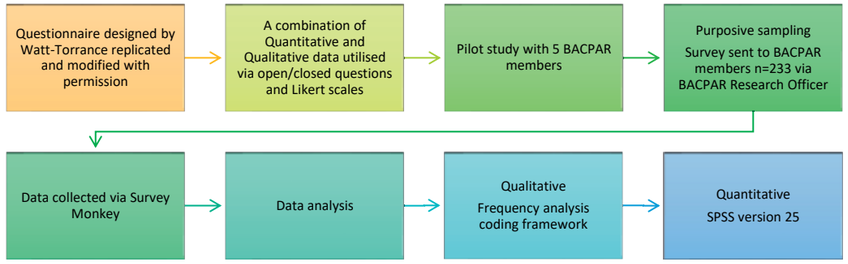
Sean Duff, Elaine O'Neill, Dan Powers, Rachel Weager, Ryan Faldo and Mary Jane Cole
Department of Rehabilitation Sciences, Faculty of Health, Social Care and Education, Kingston University and St George's University of London

## BACKGROUND

In 2012, BACPAR published guidance on the oedema management of transtibial (TTAs) amputees in which rigid dressings (RDs) have the strongest grade (B) of recommendation (SIGN 2008). In 2014 Watt-Torrance reviewed techniques used by Physiotherapists (PTs) and found that despite BACPAR guidance, RDs were poorly utilised. In 2015, Geertzen et al supported the use of RDs and suggested that oedema control also be supported via the 'muscle pump' through exercise. The use of RDs and more specifically removable rigid dressings (RRDs) was more recently advocated in a 2018 systematic review by Reichmann et al.

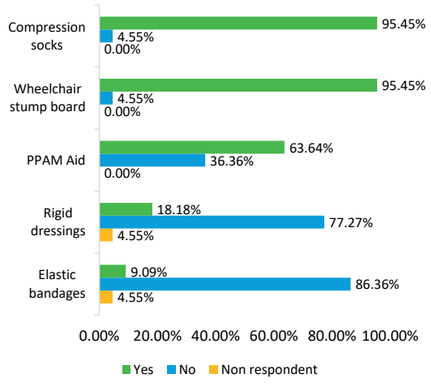
**Aim:** This study aimed to review current oedema management techniques utilised by PTs in the management of TTAs, exploring the reasons behind their choice. An additional objective was to explore whether exercise is utilised as an oedema management technique.

## METHOD

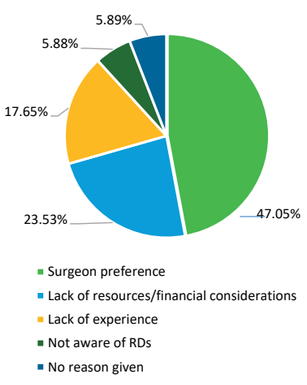



## RESULTS

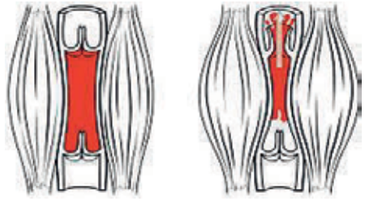
### Oedema management techniques




### Reasons for non-use of RDs




### Exercise as a management technique



| | |
|---|---|
| 50.00% | report exercise as positive and effective |
| 31.81% | of respondents use exercise as an adjunct |
| 22.72% | believe exercise to have a positive physiological effect |
| 31.81% | had not considered exercise at all |

## DISCUSSION and CONCLUSION

- This study found similar results to those of Watt-Torrance. Despite increasing evidence for the use of RDs, 72.27% of respondents do not use RDs, an increase from 68% (Watt-Torrance)
- Surgeon choice remains the biggest barrier with one respondent citing there was "a degree of apathy amongst doctors" when trying to introduce them
- Growing evidence, most recently by Reichmann et al (2018), found that RDs and RRDs resulted in better outcomes including faster healing times and reduced limb oedema
- The case for other members of the MDT to 'up skill' to apply RDs or RRDs must be considered if continued resistance to the evidence is encountered
- The action of the muscle pump has well documented physiological benefits in the reduction of oedema in the non-amputee population. Recent Dutch guidelines support the use of exercise as a specific oedema management technique
- Respondents' views of exercise as an oedema management technique were variable with 50% reporting it as beneficial and effective and 31.81% had not considered exercise at all

## RECOMMENDATIONS

- Further exploration of the barriers to RDs and RRDs need to be explored with the MDT
- Physiotherapists have a significant role in early management of the amputee and the opportunity to 'up skill' to apply RDs and RRDs may provide a viable solution
- Exercise as an oedema management technique is limited to personal experience. Further research is required to assess its effect in the TTA population

## LIMITATIONS

- This study acknowledges the low sample size and therefore the difficulty extending the results wider

## ACKNOWLEDGMENTS

- With special thanks to Elizabeth Watt-Torrance and Mary Jane Cole

## REFERENCES

- Reichmann J, Stevens P, Rheinstein J, Kreulen C. Removable Rigid Dressings for Postoperative Management of Transtibial Amputations: A Review of Published Evidence. *PM&R*. 2018;10(5):516-523.
- Geertzen J, van der Linde H, Rosenbrand K, Conradi M, Deckers J, Koning J, HS Rietman, Van Der Schaaf D, Van Der Ploeg J, Schapendonk E, Schrier, Duijzentkunst RS, Spruit-Van Erik M, Versteegen G & Voesten H. Dutch evidence-based guidelines for amputation and prosthetics of the lower extremity: Rehabilitation process and prosthetics. Part 2. *Prosthetics and Orthotics International*. 2015;39(5):361-371.

# RIGID REMOVABLE DRESSINGS COURSE AT MANCHESTER ROYAL INFIRMARY

**Naheed Ahmed**
**Senior Physiotherapist, Manchester Royal Infirmary**

There are over 5000 major amputations in the UK caused mainly by arterial disease (Ahmad et al. 2014) but also trauma and sarcomas.

Oedema post amputation is very common due to sheer trauma to the residual limb – commonly referred to as the stump – but can persist due to inactivity, loss of muscle tone, and the effects of gravity. Management of post op oedema is vital role in the rehabilitation of amputees as the presence of oedema can impede wound healing. Delayed healing can have adverse effects for an individual and cause pain, affect mood, delay mobility, increase time to casting and increase hospital length of stay.

The management of transtibial oedema has been researched and although the BACPAR guidelines (Bouch et al. 2012) outline the benefits and recommended Rigid Removal Dressings (RRDs) as gold standards, they remain underused across trusts around the UK. These findings have been confirmed by a recent survey carried out by pre-registration Physiotherapy students at Kingston and St George's University of London; see accompanying poster (Duff et al 2008).

Reasons for this include reduced knowledge and understanding of the dressing, lack of skills required for fabrication and management as well and reluctance from surgeons and specialist nurses (Hidayati et al. 2013).

RRDs were introduced to the Manchester Royal Infirmary (MRI) in 2011, and the technique was adopted and developed to suit the needs of the patients and the skills of the clinicians. The RRD utilised at the MRI is relatively simple to fabricate and cost and time effective. Other forms of RRDs are available including plaster of paris casts and the Ossur vacuum dressing. The RRD has been found to protect stumps and reduce complications with wound healing and assists with stump oedema.

It became apparent to us that the skills and knowledge required for RRDs and their fabrication was something that was important to share amongst colleagues to allow other patients to gain from the same benefits we had found.

A day long course was held on Sunday 27th January 2019 by myself and Liz Bouch (Clinical Lead Physiotherapist). It involved teaching participants (Physiotherapists and Occupational Therapists) the history, rationale, evidence base and indications for using RRDs. The afternoon session predominately consisted of a practical element where the individuals fabricated their own RRD, under the guidance of myself and Liz. A previous patient of ours, who had first-hand experience of wearing an RRD,

kindly attended and provided valuable feedback to participants fabricating the RRD on his stump. He was also willing and able to answer questions about his own experience of the RRD.

The course was very well received and feedback was positive from all who attended. We appreciate that a change of practice is not always easy to implement and are aware that this technique needs to be introduced and involve the agreement of surgeons who can play a huge impact on post-operative dressing choices.

At the BACPAR conference, some therapists expressed an interest in the course but felt that this decision for dressings was not always in agreement with or understood by the wider multi-disciplinary team.  Here at the MRI and for those attending the course, the surgeons have supported the use of RRDs in the management of post op oedema in lower limb amputees and we look forward to hearing how the participants implement their use into clinical practice.

Liz and I would be happy to run this course again if this would be of interest to BACPAR members.

**References**

Ahmad. N., Thomas. N., Gill. P., Chan.C and Torella. F. (2014) Lower limb amputation in England: prevalence, regional variation and relationship with revascularisation, deprivation and risk factors.Aretrospective review of hospital data. Journal of the Royal Society of Medicine, 107(12), pp 483-489.

Bouch. E., Burns, K., Geer, E., Fuller, M and Rose, A. (2012) Guidance for the multi-disciplinary team on the management of post-operative residuum oedema in lower limb amputees. British Association of Chartered Physiotherapists in Amputee Rehabilitation.

Duff, S., O'Neill, E., Powers. D., Faldo, R., Weager, R.and Cole, M.J.  Minimal change in the oedema management approach for transtibial amputees despite the evidence. Poster presented at: BACPAR Conference 2018 November 15-16.

Hidayati, E., Ilyas, E., Murdana, I., Tarigan, T and Werdhani, R. (2013) Efficacy of removable rigid dressing after trantibial amputation in diabetes mellitus patients. Medical Journal of Indonesia, 22(1), pp. 16-21.





## VASCULAR SOCIETY CONFERENCE 2018

# WHAT'S IN IT FOR PHYSIO'S?

**Hayley Crane**
**Physiotherapist PhD Student, Vascular Academic Unit Hull Royal Infirmary**

Last November I attended the Vascular Societies' Annual Scientific Meeting in the vibrant, if very wet, City of Glasgow.

The conference took place at the Scottish Event Campus, Scotland's largest exhibition centre. Multiple talks ran concurrently in separate lecture theatres and a large area was devoted to posters and other exhibits. The exhibition stands included specialist surgical equipment, vascular charities, the vascular Cochrane group and other research associations which all provided excellent information (and great freebies too)!

Both the Society of Vascular Nurses and Society for Vascular Technology ran events in conjunction with the conference, which in addition to the comprehensive and varied programme, meant there were always plenty of interesting talks to choose from.

Day one started with a competition for the best presentation amongst junior researchers. Each speaker was allocated 5 minutes to introduce their research project and the best few were asked to do a full talk the next day. The winner was a very impressive young second year medical student presenting her work surrounding the Obesity Paradox, the described phenomenon whereby obese and morbidly obese patients have a lower mortality from cardiovascular disease versus patients with a lower BMI. She described the audit she had conducted to investigate if this existed in Vascular Surgery. Her confidence and enthusiasm won the judges over and she was rewarded the top prize.

Another ruthless competition running was the Dragons' Den session where six vascular trainees presented their research proposals in a bid for funding in front of four very intimidating "dragons". The winning project involved trialling a limb ischaemia scanner, a small device to be used by non-specialists in emergency departments.

The conference programme was diverse and had plenty of content relevant to a physiotherapist. Unfortunately I didn't make it to the sessions on the Blart or rigid dressings as I was busy bothering delegates to complete a questionnaire for my own research project. However, I did attend a talk on outcomes post amputation and was pleased to hear the vascular consultant referencing the SPARG data and giving them the praise their work deserves.

The discounted rate for physiotherapy delegates is very reasonable and I would certainly recommend any vascular physio's out there considering attending to do so in future.

# PINBOARD

I ♥ BACPAR

**BACPAR Public Relations Officer**
**Please use this new Email address for any contact re the Social Media parts of the PRO role:**
**BACPAR.socialmedia@gmail.com**

**SAVE THE DATE!**
**2019 BACPAR Conference**
**14th-15th November 2019 at**
**Wolverhampton Science Park**
**Programme and details to be published shortly**

**PhysioTec**

**At the BACPAR 2018 conference Pace Rehabilitation announced an exciting collaboration with PhysioTec who provide an online platform to produce exercise programmes. The purpose of this was to create a lower limb amputee module which includes a wide range of exercises suitable for both prosthetic limb wearers and non-prosthetic limb wearers.**

**We are happy to announce that this module has now gone live! We hope that this will be an evolving project, so if there are exercises you would like to be included, please let us know and we can add them during the next round of filming. Contact PhysioTec directly to subscribe and request costs.**

**If you are interested in trying out the programme first you can request a free trial via the PhysioTec website.** https://www.physiotec.ca/index.php

**For any further questions or comments please contact jrobinson@pacerehab.com**

STEEL BONES FOR CIVILIAN AMPUTEES

*Do you know about Steel Bones? We work 121 with amputee families to help them overcome the trauma of amputation. We hold FREE family events and run clubs too. Check out our website www.steelbonesuk.co.uk for info and click here for our events: https://steelbone.co.uk/upcoming-events/*

Why not join 121 of our Members who have joined our closed BACPAR Facebook Group?

Find it at: BACPAR-Members Only

In recent weeks you will have seen content about the new Barbie with a prosthetic leg, new disability Emoji's, the elephant with a prosthetic leg as well as discussions about clinical issues, adverts for training opportunities and even our very own Ireland Regional Rep Carolyn Wilson and colleagues appearing in the UTV Northern Ireland 'Up Close' Programme about their services.




Barbie Is Now in a Wheelchair and Has a Prosthetic Leg

She's more inclusive than ever.

Brittney McNamara

## ASSESSMENT OF PLANTAR PRESSURES OF THE CONTRALATERAL LIMB IN PERSONS WITH TRANSTIBIAL AMPUTATION DURING EARLY STAGES OF REHABILITATION

# A PILOT STUDY IN MALTA

**Author: Ms. Michela Catania**
**(BSc (Hons) Physiotherapy, MSc Rehabilitation Studies, University of Strathclyde) (Senior Physiotherapist, Amputee Rehabilitation Unit, St Luke's Hospital, Malta)**

**Corresponding Author: Dr. Anthony McGarry**
**(Senior Teaching Fellow - University of Strathclyde) anthony.mcgarry@strath.ac.uk**

Introduction: This pilot study aims to investigate how the use of a protective insole redistributes plantar pressure on the sound side of patients with diabetic transtibial lower limb amputation whilst wearing a prosthesis. Diabetes Mellitus is defined by the World Health Organisation (2016) as a chronic metabolic disease characterized by elevated levels of blood glucose (or blood sugar), which over time leads to serious damage to the heart, blood vessels, eyes, kidneys, and nerves.[1] Vascular disease consists of arterial or venous insufficiencies to an organ. In a recent study carried out in 2012, Formosa et al., stated that 16.7% of the Maltese population may be living with diabetes or impaired glucose tolerance.[2]

Changes caused by diabetes lead to altered gait biomechanics; altered pressures within the foot with increased risk of shear forces and pressure leading to ulcers. Such outcomes may have great impact on quality of life and loss of independence, especially in older people.[3] According to the Malta amputee statistics database in 2016, 75% of amputations last year resulted from secondary causes of diabetes. The majority of amputees fell within the age group of 70-79 years.

Methodology: Data was collected by a single physiotherapist once local (Maltese), UK University Ethics boards approved the study (UEC16/85) and consent was obtainedover a time frame of 3 months. Researchers were provided adequate training with measurement apparatus used prior to starting this study. Six participants were recruited by convenience sampling from the Amputee Rehabilitation Unit at the Physiotherapy Department, St Luke's Hospital, Malta where they attended for Physiotherapy Rehabilitation.

These were prosthetic users with a transtibial amputation of all aetiology; of both gender and over 18 years of age. Participants were included if supplied with a primary prosthesis for at least 2 weeks and had the ability to stand and walk unaided within parallel bars. This time frame was chosen since it is the stage at which significant gait adaptations occur. It is considered that the patient is likely to have become used to weight shift and weight bearing at this stage, whilst at the same time not leaving it too late for the patient to adapt to altered gait patterns when possible.[5] Participants had no current unhealed ulcers (should be healed for at least 6 months) or foot deformities/impairments on the sound side that did not allow foot flat during stance phase.[4]

Participants were provided with a custom made offloading Poron® material insole prepared by a podiatrist and asked to walk at a self selected pacefor approximately 8 seconds between parallel bars for approximately 10m, two weeks after having received their initial prosthesis. Data was recorded after walking once between parallel bars in order to familiarise themselves with the surroundings and with the feel of the test apparatus attached to their leg. Parallel bars were used for safety but not as a support and this method was used so as to adopt a natural gait pattern. A metronome was not used as a self-selected speed was used to simulate natural gait. The data included plantar pressure variables (peak pressure and pressure-time integral) using the TekScanFscanTM system (Figure 1). These were acquired at 100Hz for five plantar areas (heel, mid foot, lateral and medial forefoot and hallux) similar to that used by Sacco et al.'s study[6]. An average plantar pressure of a minimum of 5 steps was taken. Three trials were carried out without the use of an insole (each user acting as their own control) and another three with the use of a Poron® insole. Pressure areas analysed during stance phase included the entire plantar surface of the foot; the hallux, metatarsals (divided into the first, second-fourth and fifth), and the calcaneus.

The foot sensors had a spatial density of four pressure sensors per cm2 and recorded the data for 8 seconds. This method aims to ensure that participants reach a constant velocity and targets the rhythmic phase of gait.[9] New sensors were used for each participant.[10] The first and last step was always excluded in calculating the average maximum plantar pressure. Although studies have used more steps in calculating the average pressure such as 20 valid steps for statistical purposes, this was not possible since most patients were not walking such long distances unaided at this point.[6,7]

The readings were analysed once the patient took a strike on the second step (two step gait initiation). The pressure time integral calculates a value for each cell in the stance over the whole length of time. The movie is divided into stances and the integral value of each cell calculated which takes into account the time that the pressures were present on each cell. Thus it takes into consideration the total pressure present in the stance phase of each frame as well as the duration of that frame (TekScanFscanTM). An average was again taken for the analysis of PTI, as measured in KiloPascals per second.[10]

Results: Data was analysed using the TekScanFscanTM software and Statistical Package for Social Sciences (SPSS 24.0) programme for statistical analysis. Descriptive statistics were also used to analyse and compare patient demographics and clinical characteristics. Due to the different amputation areas on the sound limb, only the heel area was used to analyse data statistically since it was common for all six patients and the other areas were described for common trends. Both parametric and non-parametric tests were used after a normality was considered. A one-way ANOVA test (parametric) and Friedman's test (non-parametric) tests were used in comparing the trials and the Paired T-Test (parametric) and Wilcoxon (non-parametric) tests were used to ascertain differences in significance of using an insole or not. In addition, the effect of time (comparison of the three walking trials) on the pressure readings, and the effect of wearing the insole or not on the peak pressure and pressure time integral, were also analysed.

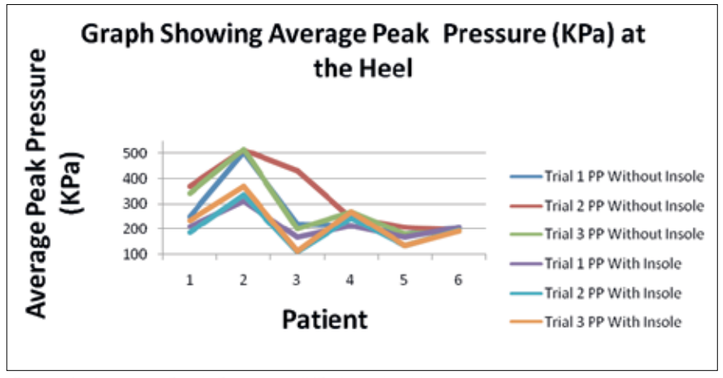
Results were initially analysed on whether there was a statistically significant difference during the three gait trials impacting the peak pressure values. Inherent adapted gait patterns affecting peak pressures at the different areas were noted. Whether a significant difference impacted peak pressure at the different areas when wearing an insole as compared to not was also considered. The interaction effect using a larger cohort of patients; that is, whether there

*Figure 1: Replica of wireless equipment used inside footwear. Accessed from: https://www.tekscan.com/sites/default/files/styles/product_image/public/f-scan-system_0.jpg?itok=0dLJ4vZV*

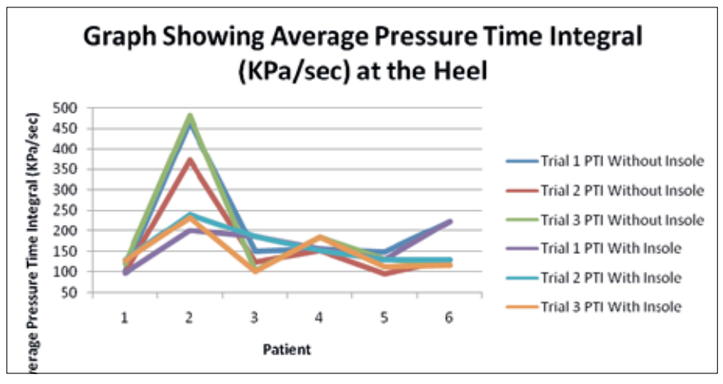
is a significant decrease in peak pressure once the patient starts walking repeatedly (without an insole) and does this decrease further once the patient is wearing an insole; that is, does repetition of gait and wearing an insole together statistically significantly decreasing the peak pressure. Results with a p value less than 0.05 was considered to be statistically significant at 95% confidence interval accepting the alternative hypothesis. Following statistical analysis, a significant increase was noted in plantar pressure and pressure time integral at the heel on the sound limb when wearing an insole compared to non-insole use whilst wearing a prosthetic limb.

# DISCUSSION

6 prosthetic users participated over a period of three clinics. All patients were male with ages varying from 50 years to 84 years (mean age 69.3 years; mean weight 80.0kgs). For most patients the amputation was secondary to diabetes, meaning they are most at risk for ulceration, with the remaining participant the cause being secondary to trauma. Two participants had a toe amputation, two transmetatarsal amputations and two with no amputations.




*Graph1: Average Peak Pressure (KPa) at the Heel*




*Graph 2: Average Pressure Time Integral(KPa/sec) at the Heel*

Several studies have demonstrated how appropriate foot care can help prevent further complications, assess risk management and provide general well-being for the patient.[1,2,3,11,12] Literature has shown that clinicians may use plantar pressure readings in conjunction with orthotic insoles to prevent the patient being at risk of ulceration in a most cost-effective way.[7,10,13]

The most important findings showing from the paired sample T test of this study indicated an overall decrease in pressure at the heel when wearing an insole with regards to the mean peak plantar pressures (p=0.050). The pressure time integral at the heel on the other hand was found to be insignificant (0.144) and may relate to the fact that it is averaged over a larger period of time. This was significant to the heel area perhaps relating to the contouring of the insole.

In this study, although diabetes was not an inclusion criteria, when comparing results of wearing an insole to not wearing an insole for all patients as compared to the results of excluding the non-diabetic patient, one can note quite a significant difference in peak pressure at the heel only when excluding the non-diabetic patient (p=0.042) since the insole used did not make a difference for the non-diabetic patient; this again emphasizes the importance of its use for diabetic patients who are the ones most at risk. On the other hand there was no significant difference for pressure time integral at the heel for all patients (p=0.144), which is in line with Waldecker's study in 2012.

This study supported the fact that there was a small change in average peak pressure over time in all areas analysed of the foot when using an insole as compared to not. Although different parts of the foot have different surface areas and roles during the gait cycle, the researcher noted no particular trend for all areas analysed and results could not be conclusive. Generally there was a decrease in average peak pressure with the insole as compared to without (graph 1) this however, was not consistent for all and neither was it less on the third trial as compared to the first. As for the average pressure time integral with the insole as compared to without (graph 2) the difference was much less and also less consistent over the three trials. This may be related to the fact that it is taken over a longer period of time. Results for the heel showed that the p-value of peak pressure and pressure time integral against each trial was in fact, insignificant for both.

Conclusion: Results of this study indicate that the use of an insole on the sound side whilst wearing a prosthetic limb may reduce peak plantar pressures related to those found in literature in patients at risk of ulceration. This pilot indicates that further research should be conducted to provide conclusive evidence due to the limited population size. This study also provides useful information for further research on how to provide care in maintaining the safety of diabetic patients with amputation during rehabilitation and thus prevents detrimental complications of ulceration.

## References

[1] World Health Organization (Reviewed November 2016). Diabetes. Retrieved from http://www.who.int/diabetes/en/

[2] Formosa, C., Gatt., A., Chockalingam, N., (2012). The importance of clinical biomechanical assessment of foot deformity and joint mobility in people living with type-2 diabetes within a primary care setting.Primary Care Diabetes 294 (2013), http://dx.doi.org/10.1016/j.pcd.2012.12.003

[3] Gregg, E., Engelgau, M., & Narayan, V. (2002). Complications of diabetes in elderly

people. British Medical Journal, 325(7370), 916-917.

[4]Sacco, I.C.N., Hamamoto, A.N., Tonicelli, L.M.G., Watari, R., Ortega, N.R.S., ,Sartor, C.D.., (2014) Abnormalities of plantar pressure distribution in early, intermediate, and late stages of diabetic neuropathy. Gait and posture

[5] Van Keekan, HG., (2013) Model and measurement studies on prosthetic gait. Accessed on 20th July 2015 from: http://www.prostheticlimb.info/

[6] Sacco, I.C.N., Sartor, C.D., (2016)From treatment to preventive actions: improving function in patients with diabetic polyneuropathy. Diabetes/ Metabolism Research and Reviews 32(1): 206–212.

[7] Zammit, G.V., Menz, H.B., Munteanu, S.E., (2010). Reliability of the TekScanMatScan system for the measurement of plantar forces and pressures during barefoot level walking in healthy adults. Journal of foot and ankle research 3(11)

[9] Lindemann U., Najafi B., Zijlstra W., Hauer K., Muche R., Becker C., Aminian K., (2008) Distance to achieve steady state walking speed in frail elderly persons. GaitPosture 27(1); 91-96.

[10] Hellstrand Tang, U., Zügner, R., Lisovskaja, V., Karlsson, J., Hagberg, K., Tranberg, R., (2014). Comparison of plantar pressure in three types of insole given to patients with diabetes at risk of developing foot ulcers: A two-year, randomized trial. Journal of Clinical & Translational Endocrinology 1 pp. 121-132

[11] Razak, A.H.A., Zayegh, A., Begg, R.K., and Wahab, Y., (2012). Foot Plantar Pressure Measurement System: A Review. Sensors 12(7) pp 9884-9912

[12] Kanade, R.V., van Deursen, R.W.M., Price, P., and Harding, K., (2005) Risk of plantar ulceration in diabetic patients with single leg amputation. Clinical Biomechanics. 21 pp.306-313.

[13] Bus, S.A., Ulbrecht, J.S., and Cavanagh, P.R., (2004) Pressure relief and load redistribution by custom-made insoles in diabetic patients with neuropathy and foot deformity. Clinical Biomechanics. 19 pp.629-638.

SOUTH THAMES REGIONAL STUDY DAY

# ORGANISING MY FIRST STUDY DAY: HOW TO PROMOTE HEALTHY LIVING

**Hayley Freeman**
**Senior Physiotherapist, Gillingham Disability Services Centre.**
**South Thames Regional Rep.**

On the 26th September 2018 I ran my first regional study day for the South Thames members. To say I was **nervous** is a huge understatement! However, the organising of it was far harder work than running the actual day. So I thought I would share my experience with you all, some of you may relate to it and some may even learn from it.

**Topic** was naturally my first thought, I brainstormed a few ideas with a colleague and eventually came up with "How to Promote Healthy Living". I felt I was a little out of touch with what the latest evidenced recommendations were regarding health promotion and was not confident when giving my patients advice. I thought if I feel like this other's surely do too so maybe I could educate myself and other BACPAR members, therefore benefitting our patients.

Next step was organising the topics and asking specialists to present at the day, I foolishly thought "if I get other presenters in to discuss the topics it will be less stressful for me on the day" I was wrong! Communicating with the other presenting professionals was probably the most frustrating part of the organisation. I spent a lot of time seeking confirmation and waiting on replies to emails than I ever imagined. I had to keep reminding myself that we are all working in a very busy service and although this was one of my priorities at the time it was not theirs.

So then a date was set in June and I decided to host at Gillingham DSC, my workplace, to keep things easy for myself. However, an oversight of mine was not considering **venue fees**. I informed my manager of my planned course and understandably, she queried the fees I was charging. We eventually were able to come to an agreement of a set venue charge and free places for the Gillingham DSC staff.

I then created posters, a timetable and an application form and distributed them to my South Thames members, local community and acute therapy teams and finally other BACPAR regional reps and our Facebook page. Unfortunately the applicant numbers were quite low (7 in total), and after much deliberation I decided to **postpone** the course to September. Due to the venue fees the course would not have broken even and I did want to reach a wider audience. I think the low attendance rate was due to the date being quite close to our BACPAR Bob Gailey course and another local course.

So then my communication nightmare begins again. Reorganising the date for applicants, presenters and updating all of the paperwork. But the extra grey hairs were worth it as I almost tripled the applicant list. Applicant **fees** was something that I was initially quite apprehensive about managing, however I have got to say it really was not a problem. I set the fee at BACPAR's suggested amount of £5 per members and £35 for non-members. The non-member fee was purposely set the same as membership fees to encourage people to join BACPAR: I did document this on the application form however no one joined. I worried the £35 may put some applicants off but it did not seem too. Collecting applicants' money really was not problematic either.

The course date came round quick and I purposely devised a **flexible programme** regarding times as I still had not had definite confirmation from 2 of the presenters. I prepared an extra presentation that I could present last minute or could issue out as information packs if not needed. Another important consideration was obviously refreshments when planning a course for physio's! Even more to consider when discussing healthy living, obviously there was fruit provided along with the biscuits.

The day started with a welcome and introduction by myself, followed by a presentation from a **Dietician.** She discussed healthy eating habits, diet requirements for our rehabbing patients, along with nutritional needs to aid healing wounds and then what diet to recommend when discussing weight loss with our patient's (Weight Watchers and Sliming World in case you were wondering).

She was then followed by our very enthusiastic and engaging **Stop Smoking Team** who provided some really interesting facts, advice and props. They also discussed the pro's and cons of Vaping which I found very interesting and reported that they would recommend vaping for patients if it means they quit smoking.

Then this is where my over organised self paid off as the Diabetic Nurse Specialist got lost! She was over half an hour late but luckily I smoothly filled the time with the extra presentation on health apps, games and websites that we can recommend to our patients to empower their lifestyle changes. The **Diabetic Nurse** then followed with an interactive session on the causes, treatments and advice/tools we can provide our patients with.

The afternoon sessions were practical based with a presentation from a **MSK physiotherapist** who discussed the benefits of different types of exercise modes and who/when to recommend them to. She also lead a short **Pilates** class where we were able to discuss adapting the positions/ difficulty levels for our amputee patients. Her firm, assertive approach definitely kept people awake after lunch!

Finally but definitely no means least our DSC **Counsellor** talked about how to promote a "Healthy Mind". She discussed and demonstrated how to encourage Mindfulness, stress management, relaxation techniques and provided us with a lot of knowledge and tools to use with our patient group. She definitely left us all wanting more as one feedback suggested "she was so interesting I could have listened to her all day".

By the end of the day I was **exhausted** but really happy with the positive feedback, new knowledge learnt and I felt **proud** of myself for successfully running my first Study Day. I have learnt a lot along the way about organising an event which is something I had no experience of and I am pretty sure the next one will not be as stressful, **bring it on!**

NORTHERN IRELAND REGIONAL REP REPORT

# STUDY DAY NOVEMBER 2018

**Helen Brannigan and Carolyn Wilson**
**(BACPAR Ireland Regional Rep)**

In November 2018 we ran a Multidisciplinary Amputee study day in the Mitre Unit in Musgrave Park Hospital.This was jointly organised by the Physiotherapy and Occupational Therapy team in the Regional Amputee Rehabilitation Centre. Speakers came from a range of professions within the Belfast Trust and covered all aspects of amputee rehabilitation from the acute setting to discharge. Over 40 Physiotherapists and Occupational Therapists attended from across all the Healthcare Trusts in Northern Ireland.

The course was divided into 2 sessions with the morning session dealing with theory for both Physiotherapists and Occupational Therapists. In the afternoon we spilt the Physiotherapists and OTs into separate groups and ran some practical session's specific to each discipline.

# THE SCOTTISH SPECIALIST PROSTHETICS SERVICE (SSPS)

**Dr Fiona Davie-Smith**
**Clinical Co-ordinator Scottish Specialist Prosthetics Service**

The Scottish Specialist Prosthetics Service (SSPS) started in 2013 and was commissioned to provide "state of the art" prosthetic limbs to NHS patients who were deemed to meet the eligibility criteria. The funding is ring fenced through the National Services Division and is a recurring annual budget for staffing and componentry. The SSPS provides more than microprocessor knees, with upper and lower sporting devices, hydraulic foot and ankles and multiarticulating hands also delivered. This is a singular service which supplies these prosthetic limbs to the whole of Scotland which is made up of 14 health boards. The service was set up with two centres that the users would travel to for treatment, one in the East of Scotland in the SMART centre in

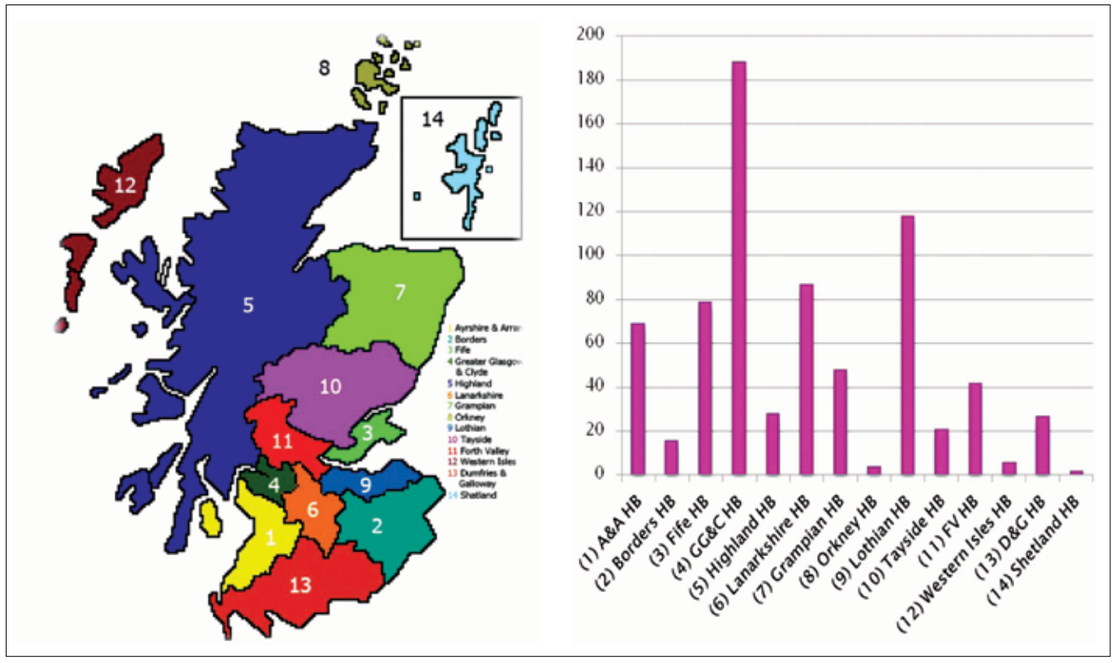



**Figure 1:** *Scotland divided by Health Board (4 and 9 are the SSPS centre's) and referrals by Health Board*

Edinburgh, and the other in the West of Scotland at WestMARC in Glasgow (See Figure 1).

There is an SSPS pathway for all users to access the service (Figure 2), the first stage is with their referring prosthetists who ensures that the patient is eligible, has a comfortable socket and is able to travel (if necessary) to the SSPS centre. The referral must state what the user's current limitations are and how the new SSPS limb will be of benefit. The referrals are then reviewed on a monthly basis with a National MDT who is made up of expert clinicians and mangers from both centres. Once a decision has been made, the referring prosthetist is informed and the patient is appointed to the appropriate centre for physiotherapy outcome measures and copying or casting of their current socket. They then attend to have their fitting and delivery and depending on the type of SSPS limb this may also require physiotherapy or Occupational therapy rehabilitation which takes place at the SSPS centre. After 6 months the user will return to the SSPS centre for a repeat of their outcome measures, these vary depending on the type of limb however the majority of MPK users will complete the following measures:

- Amp Pro
- 2 min walk test
- 10m timed walk test
- Self reported falls
- ABC
- LCI-5
- Self reported MWD
- EQ-5D-5L
- PLUS-M
- SCS
- L-Test

There are some referrals that are not able to go forward to provision due to contraindications such as those listed below:

- Significant flexion contractures preventing correct alignment
- Patient's weight or height does not meet the manufacturer's specifications
- Exposure to aggressive environments such as excessive moisture or dust, very warm or cold


*Figure 2: SSPS User Pathway*

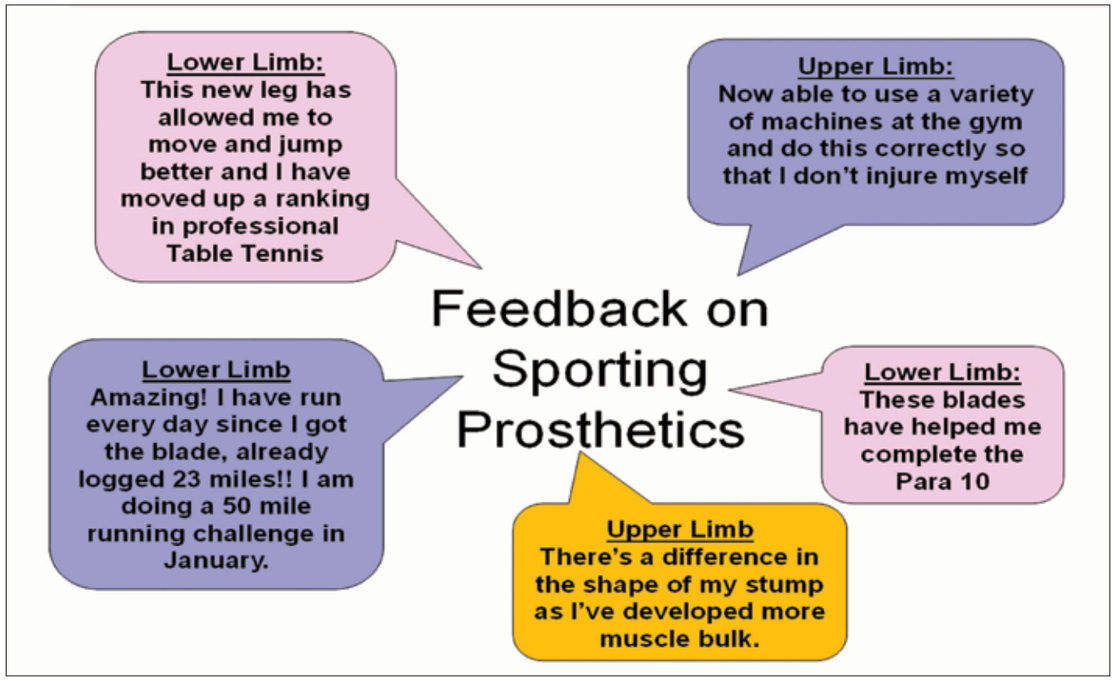



*Figure 3: User Experience of SSPS Sporting Limbs*

weather, mechanical vibrations, strong magnetic fields

- Person unable to tolerate the weight of the SSPS limb
- Insufficient space to fit the SSPS limb or where cosmetic appearance will be an issue for the user
- Failure to achieve good socket fit or comfort

Annually the SSPS has a service level agreement based on the provision of 162 prosthetic limbs; this is composed of 53 MPKs, 92 Foot and Ankles, 9 MAH and 8 sporting limbs; however this number is constantly exceeded with demand being high for SSPS. In the past few years we are starting to see more hydraulic foot and ankles being provided than expected as the SSPS clinicians are appreciating the significant benefit that these feet offer not only Transtibial users but also knee disarticulation and Transfemoral users. Conversely, SSPS has reached the core group of possible MPK users, and as such the demand for MPKs has reduced, however as SSPS moves into its fifth year there is the likelihood that original MPK users will have their limbs replaced or upgraded and their warranty expires and repairs are required.

There has been a continuous increase in referral for sporting limbs, both upper and lower in the past two years; this is no doubt from the legacy of the Glasgow 2014 Commonwealth games and the increased media coverage of Para-athletes in all sports. In order to be eligible for a sporting limb, the user must demonstrate frequent engagement in sporting activities and show significant wear on traditional prosthetic components. Those who are provided with sporting limbs have very unique goals and as such it is their anecdotal evidence which is powerful in demonstrating how successful their provision has been (Figure 3).

The future of the Scottish Specialist Prosthetics Service is bright and the opportunity to add to the evidence base in this field is the main focus of the SSPS work plan. This coming year will focus on the users feedback of all SSPS limbs and the dissemination of the evidence that has already been collected.

# SSPS – A SUMMARY

## (FOLLOWING THE BACPAR CONFERENCE NOVEMBER 2018)

**Alistair Ward**
**Prosthetist**

The SSPS is our service's name
Though weekly it seems this is never the same
WESTMARC and SMART must fit all of the bits
They build all the limbs like meccano'esque kits

If you look at a map it's unfortunately clear
Provision's been biased to those who live near
It's obvious to us that this really must change
We need more referrals from far greater range

Since 2013 we've done hundreds of knees
End-users have found them the absolute bees
We've set KPIs and review all we do
They're usually hit but we have missed a few

We take several measures of how people go
To maximise all of the things we can know
SCS, the Plus M, ABC, 123
Tell us all if we're being the best we can be

So who do we fit, well K3 or K4
Unilateral bilateral we'll attempt them for sure
Whether it's a new leg or perhaps a new arm
New shiny components just work like a charm

There's hydraulic ankles that are so super cool
And are loved by their users as a general rule
Posh hands that have digits now also supplied
Mean it's ever more like in our budget we lied

A DASH or a SHAPS with a poke or a grip
It has to be said these prehensors are hip
As good in real life we just cannot be sure
They seem to work well so we'll surely do more

It must also be said that we can't win them all
For some there's no room if they're not very tall
Space is a challenge, and so can be weight
But so far I'd say things are generally great





# VISIT TO CAMBODIA 2018

**Carolyn Wilson**
**Specialist Physiotherapist in Amputee Rehabilitation**

In November my husband was going to Cambodia to do some voluntary work with an NGO in Phnom Penh and had asked me if I wanted to accompany him.

## CAMBODIA

Cambodia remains among the poorest and most corrupt countries in Southeast Asia. Poverty is most widespread among the rural population, in ethnic minority groups and among the disabled (Humanity & Inclusion).

Landmines were laid in Cambodia during the war with the Khmer Rouge in 1979 and continued until its demise in 1998. Although 50% of Cambodia's minefields have now been cleared, Cambodia is still one of the most landmine impacted countries in the world with over 64,000 casualties recorded since 1979 and over 25,000 amputees - the highest ratio per capita in the world (Halo Trust).

Cambodia's population remains predominately rural with only 20% living in urban area. However, this is likely to change due to the increasing rate of migration out of rural areas to the capital, Phnom Penh, and this percentage is expected to double by 2030. Figures from the Asia Injury Prevention Foundation produced in 2013, reported that road traffic crashes caused 2,635 deaths and 55,244 injuries per year. Motorcycle crashes caused 14 times as many fatalities as malaria, dengue fever, and landmines combined. During the wet season, the Cambodian School of Prosthetics and Orthotics (CSPO) expects to receive up to 3 times more amputees due to road traffic accidents.

## EXCEED

Carson Harte, a 'local boy' who had previously worked as a prosthetist in Amputee Rehabilitation Services, Belfast, left Northern Ireland in the early 1990's with his family and moved to Cambodia to help those injured by landmines. He spent seven years as the founder Director of Cambodia Trust, now known as Exceed international. I met Carson and heard him present at the joint BACPAR / ISPO meeting in Sheffield 2012 on "More Precious Than Gold" which discussed the impact of prosthetics and orthotics on the lives of the 'poorest of the poor' and people living with disability in the developing world.

Exceed Worldwide has been providing physical rehabilitation services in Cambodia since 1991 serving the country's 40,000 amputees. A major programme of the project is the Cambodian School of Prosthetics and Orthotics (CSPO), which provides internationally accredited training for students from all over the developing world. Exceed also operates in a number of other countries in South East Asia.

So, I contacted Exceed International and offered to volunteer for a couple of days during my trip. I have some experience teaching both undergraduate students and qualified staff and so it was decided I would be of most use in this capacity, instead of assisting with clinical work.

Exceed's national director Sisary Kheng asked me to lecture to the prosthetic students at the CSPO and I decided to base the teaching onmaterial I had previously used to provide training for AGILE, on behalf of BACPAR last year. Humanity and Inclusion UK also gave me permission to use their resources which proved invaluable. Many clinics do not have

a physiotherapist and the prosthetist is the only professional available to give any form of prosthetic rehabilitation or gait retraining.

## CSPO

All the 30 prosthetic and orthotics students in the school, along with some of the lecturers, attended the presentations over 2 days. The students were from 10 different nationalities: Cambodian, Samoan, Burmese, South Sudanese, Papua New Guinean, Malawian, Bangladeshi, Indonesian, Nepali, Filippino and Sri Lankan, which resulted in some obvious language issues!

Topics covered on the first day included: Causes of amputation, Levels, Diabetes, Contralateral foot, Oedema, Phantom pain and Suitability for prosthetic Rehabilitation. On the second day we did practical sessions on normal gait, prosthetic rehabilitation, gait re-education and deviations. The students really seemed to enjoy this, which proved hilarious, with lots of versions of Monty Python's Ministry of Silly Walks'!

*Typical prostheses used in Cambodia*

I was very aware that some of our best practice and BACPAR guidelines were not applicable to their local clinical situations. For example, shrinker socks are not available and stump bandaging is routine practice. In Cambodia, patients are not issued with wheelchairs, no one had heard of a residual limb board and everyone hops post operatively!

I had been asked to set an assignment for the students, so I gave them the title: 'Reflect upon what you learnt today and discuss one thing that would not be and one that would be applicable to your local clinical setting.' The assignments made interesting reading, but I was pleased that they appeared to have understood the basics of what I was teaching... even with my Irish Accent!

While at the CSPO, I had also the opportunity to meet some of the team from Imperial College London who are in the process of designing a new prosthesis for Knee Disarticulations. Since the ICRC transfemoral prosthesis has remained unchanged since the 1970s, it has been recognised that there is demand for an affordable and functional prosthesis, specifically for knee disarticulated amputees in developing countries. A collaboration has been established between the Department of Bioengineering and Dyson School of Design Engineering at Imperial to develop low-cost assistive technologies for landmine victims.

## CULTURE SHOCK

Cambodia was a real culture shock to me. The 45-minute commute in a 'tuktuk' from our guest house to the CSPO, was hair raising. Photographs cannot do justice to the variety of sights, sounds and smells! I found the poverty in the rural districts to be heart-breaking. On my first day in the country, I met my first amputee who lived in one of the villages. This gentleman had been injured during the war and suffered a high level transfemoral amputation. He had no prosthesis, was a diabetic and was using one elbow crutch. He was seriously ill with a kidney tumour and had no resources to pay for any treatment. His family had used all their savings to pay for bloods tests and scans. Despite all this, he was uncomplaining and due to his Christian faith, had a great sense of peace in the midst of apparently hopeless circumstances. I felt frustrated and useless because even with my years of experience in amputee rehabilitation, I was of no practical help to this man.

*Delivering training to the P&O students at CSPO*

Leigh Day, one of our sponsors at the BACPAR conference, kindly gave me some teddy bears from their stand, which I was able to give to some of the children at the NGO where my husband was working.

We returned home just two weeks before Christmas. The excesses of Christmas in the UK were in sharp contrast to the poverty of Cambodia and I found it rather overwhelming. However, I was so thankful to return to work in our National Health Service... despite all its obvious flaws!

Please visit the following links for further information about Exceed International:
https://www.youtube.com/watch?v=wD4HWARsLVA
https://www.youtube.com/watch?v=cA4LOgS-qgI

# NOTES

# NOTES

# NOTES





# BACPAR Executive Officers 2018-2019

## Julia Earle
**CHAIR**

Gillingham DSC, Medway Maritime Hospital, Windmill Road, Gillingham, Kent, ME7 5PA
Tel: 01634 833926
bacpar.chair@gmail.com

## Louise Tisdale,
**VICE CHAIR**

Physiotherapy Dept, Maltings Mobility Centre,
Herbert Street, Wolverhampton WV1 1NQ
Tel: 01902 444721
Louise.Tisdale@nhs.net

## Amy Tinley
**SECRETARY**

Clinical Lead Physiotherapist, Artificial Limb unit, Sykes Street, Hull HU8 2BB
Tel: 01482 325656
bacpar.secretary@gmail.com

## Sue Lein
**TREASURER**

Tel: 01474 361789
bacpar.treasurer@gmail.com

## Sue Lein and Mary Jane Cole
**JOURNAL OFFICER**

bacparjournal@gmail.com

## Hannah Foulstone
**PRO**

Artificial Limb Unit, Sykes Street, Hull HU2 8BB
Tel: 01482 325656
bacparpro@gmail.com

## Hayley Crane
**PRO**

Physiotherapy Department, Hull Royal Infirmary, Anlaby Road, Hull HU3 2JZ
Tel: 01482 675007
bacparpro@gmail.com

## Lynsey Matthews
**MEMBERSHIP SECRETARY**

Physiotherapy Department, Portsmouth Enablement centre, St Mary's Community Health Campus, Milton Road, Portsmouth, Hants PO3 6AD
Tel: 02380 540412
bacparmembership@gmail.com

## Sarah Bradbury and Adam El-Sayed
**EDUCATION OFFICER**

Specialised Ability Centre, Ability House, Altrincham Road, Sharston, South Manchester, M22 4NY
Tel: 0161 6113769
bacpar.education@gmail.com

## Mary Jane Cole
**SPARG REPRESENTATIVE**

Tel: 07884232330
maryjrcole@aol.com

## Sara Smith
**GUIDELINES CO-ORDINATOR**

Amputee therapy team lead, St Georges Healthcare NHS Trust, Queen Mary's Hospital, Roehampton Lane, London SW15 5PN
Tel: 020 8487 6139
sarah.smith2@stgeorges.nhs.uk
Rachel Humpherson
rhumpherson@ossur.com

## Chantel Ostler
**RESEARCH OFFICER**

Physiotherapy Department, Portsmouth Enablement centre, St Mary's Community Health Campus, Milton Road, Portsmouth, Hants PO3 6AD
Tel: 02392680162
bacpar.research@gmail.com

## Dr Fiona Davie-Smith
Clinical Co-ordinator Specialist Prosthetics Service, WestMARC Queen Elizabeth University Hospital, Govan Road, Glasgow G51 4TF
Tel: 0141 201 1881
bacpar.research@gmail.com

## Naheed Ahmed
**SOCIAL MEDIA OFFICER**

Manchester Royal Infirmary, Oxford Road, Manchester M13 9WL
Tel: 07460337771
bacpar.socialmedia@gmail.com

# Bacpar regional representatives 2018-2019

## NORTHWEST/ MERSEY

**Sophie Bates**
Specialised Ability Centre, Ability House, Altrincham Road, Sharston, South Manchester M22 4NY
Tel: 0161 6113769
bacpar.northwest@gmail.com

## TRENT

**Wendy Leonard**
Physiotherapy Dept, Lincoln County Hospital, Greetwell Rd, Lincoln LN2 5QY
Tel: 01522 512512
bacpar.trent@gmail.com

## WEST MIDLANDS

**Louise Tisdale**
Physiotherapy Dept, Maltings Mobility Centre, Herbert Street, Wolverhampton WV1 1NQ
Tel: 01902 444721
bacpar.westmidlands@gmail.com

## NORTH THAMES

**Kate Conneally**
Royal Free Hospital, Hampstead Heath, Pond Street, London NW3 2QG
Tel: 020 779 40500 Bleep: 2368
kate.conneally@nhs.net

## YORKSHIRE

**Jack Cawood**
Physiotherapy, Prosthetics Service, Seacroft Hospital, York Road, Leeds. LS14 6UH
Tel: 07891109164
bacpar.yorkshire@gmail.com

## EAST ANGLIA

**Anna Cue**
Pine Cottage, Colman Hospital, Unthank Road, NORWICH. Norfolk NR2 2PJ
Tel: 01603 251260
anna.cue@nchc.nhs.uk

**Jess Withpetersen**
Rehabilitation Services, North West Anglia NHS Foundation Trust, Rehabilitation Department 007, Peterborough City Hospital, Edith Cavell Campus, Bretton Gate, PE3 9GZ
Tel: 01733 678000 ext 3659
Jess.withpetersen@nhs.net

## SOUTH CENTRAL

**Tim Randell**
Dorset Prosthetic Centre, Royal Bournemouth Hospital, Castle Lane East, Bournemouth, Dorset BH7 7DW
Tel: 01202 704363
tim.randell@rbch.nhs.uk

## SOUTH THAMES

**Hayley Freeman**
Gillingham DSC, Medway Maritime Hospital, Windmill Road, Gillingham, Kent ME7 5PA
Tel: 01634 833926
souththames.bacpar@gmail.com

**Philippa Joubert**
Bowley Close Rehabilitation Centre, Farquhar Road, Crystal Palace, London SE19 1SZ
Tel: 0203 049 7724
souththames.bacpar@gmail.com

## IRELAND

**Carolyn Wilson**
RDS, Musgrave Park Hospital, Belfast BT9 7JB
Tel: 02890638783
bacpar.irelandrep@gmail.com

## WALES

**Jennie Jones**
ALAC, Croesnewydd Road, Wrexham, LL13 7NT
Tel: 01978 727383
jennifer.jones4@wales.nhs.uk

**Rachel Malcolm**
Rachel.malcolm@wales.nhs.uk

## SCOTLAND

**Louise Whitehead**
(SPARG REP): Amputee Gym, East Block, Level 5, Ninewells Hospital, Dundee DD19SY
Tel: 01382 660111 bleep 4069
lwhitehead@nhs.net