UPDATE
BACPAR Bulletin

BE INSPIRED
Parasport Special Edition

LEARNING
BACPAR National Conference November

BRITISH ASSOCIATION OF CHARTERED PHYSIOTHERAPISTS IN AMPUTEE REHABILITATION

PARASPORT SPECIAL EDITION

AUTUMN 2016 **ISSUE 46**

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A WARM WELCOME

Julia Earle

BACPAR Chair

Clinical Specialist Physiotherapist in Amputee Rehabilitation

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CHAIR MESSAGE

Hello all,

This is my first message as Chair in the Journal as I was elected at the March Exec Committee meeting. What a daunting challenge – to try and follow in Louise Tisdale's footsteps. She has been an extremely hard working and inspirational Chair and I hope to continue to benefit from her expertise, energy and enthusiasm as she remains on the exec, currently as vice chair but possibly another role following the AGM.

For those who don't know me I have been a Specialist Physio in Amputee Rehab for a scary 21 years, 10 in the acute phase and the last 11 at the Gillingham DSC in Kent, and of course a BACPAR member for all of those and a few more. Within BACPAR I have also held exec posts as South Thames Regional Rep, Membership Secretary and Public Relations Officer. I would very much recommend being part of the exec committee if anyone is interested in joining us as several posts are up for election at the AGM – more details inside the journal, and a nicer bunch of people you could not meet, just look at our photos on the website!

Lots going on in BACPAR at the moment including updating of the pre and post op guidelines, reviewing the exec roles and looking at developing them to embrace increasing opportunities within social media, amputee rehab teaching nationally and internationally… I hope to see you at our conference and AGM to find out more.

This years Conference "Supporting the Challenging Patient" looks very interesting and is also a bit different being 1 day instead of 2, and linking in with the European Region of the World Confederation of Physical Therapy Congress, hopefully to encourage BACPAR members to attend both. I am certainly looking forward to going to them and Louise, as the primary contact for the Amputee Rehab Network of WCPT, has been very involved in encouraging interaction between amputee physios worldwide.

Hope you have all enjoyed the Paralympics as much as I have – well done to all those Superhumans taking part (as well as those supporting them) and thank you for yet another inspirational event, but of course we always hold a special place in our hearts for the competing amputees.

Julia Earle

HERE WE GO AGAIN

EDITORIAL

Welcome to the BACPAR Journal, Autumn 2016! This edition has a Parasport Special Edition insert relating to the fantastic work going on nationally in engaging our patients not only in high level sport but also in recreational activity, hobbies and exercise.

Social Media
Follow BACPAR on twitter **@BACPAR_official**
Like our BACPAR facebook page **BACPAR_Official**

Please email the new BACPAR Public Relations Officer (PRO) post Conference any upcoming regional study days, or topics of interest if you would like them to be posted on Twitter or Facebook.

BACPAR PRO email address: **bacparpro@gmail.com**

Mention BACPAR in your posts, to have us share these to BACPAR's followers. Lets raise awareness of Amputee Rehabilitation in the UK, and keep BACPAR's stakeholders updated on our activity!

Jodie

Jodie Georgiou

BACPAR Journal Officer

Advanced Amputee Rehabilitation Practitioner

Amputee Rehabilitation Unit
Guys & St Thomas NHS Foundation Trust

bacparjournal@gmail.com

BACPAR BULLETIN

EXEC COMMITTEE ROLES UP FOR GRABS

At this year's AGM, held at the National Conference in November several BACPAR Exec roles will be up for re-election. We thank those who are stepping down for their loyal work to BACPAR; **Gill Atkinson** Membership Secretary, and **Louise Tisdale** who has been caretaking the BACPAR PRO role to enable **Julia Earle** to take up her new and exciting position as our Chair. Although Louise will be stepping down from BACPAR PRO she will continue as Vice Chair.

Please find below a summary of what the roles entail. Being on the exec committee is a fantastic opportunity to work with your peers in the field of amputee rehabilitation with opportunities to influence both local and national initiatives in amputee rehabilitation, and to also support colleagues through education in the UK and beyond.

The BACPAR Exec welcomes new blood as well as our loyal friends to be apart of the exec committee.

If you are interested you will find nomination forms on the BACPAR website. Please send these to Amy Tinley BACPAR Secretary ahead of Conference.

BACPAR PUBLIC RELATIONS OFFICER (PRO):

- The PRO has an important role in promoting the activity of the group to its members, the profession and to the public.

- This is mainly to increase awareness and understanding of Physiotherapy in relation to amputee rehabilitation.

- To work with the CSP media relations officers to help to respond to enquiries from journalists relating to the group's area of expertise.

- To respond to enquiries via the BACPAR website from professionals and members of the public.

- To promote the activity of the group e.g. letting the professional press know about meetings, the new executive committee, the work the group is doing; research, conferences and guidelines.

- To promote the role of the group to the public.

- To speak to or arrange for someone else to speak to the press on issues relevant to the group. Ideally CSP Media Training should be undertaken at the earliest opportunity.

- To be responsible for any material on display at meetings and other events.

- To manage the BACPAR stand and its content: Maintaining appropriate content, liaising with members requesting use of the stand at events re appropriate type and quantity of material and arranging carriage of the stand to and from events.

- NEW TO ROLE: To take a lead role in BACPAR's social media presence, adding content and policing the Twitter and Facebook accounts. (Membership secretary will be responsible for ensuring members only have access to any private membership areas).

- Liaises with external organisations and companies: for donations, stand spaces etc.

- In collaboration with the CSP, liaising with external research organisations for example NICE. Disseminating NICE documents for consultation, which are relevant to amputee rehabilitation, to members and collating responses to feed back.

MEMBERSHIP SECRETARY:

- To manage all aspects of memberships including;

- Respond to enquiries about membership.

- Receive and process all membership applications.

- Keep records of paid up members that meet with CSP on-going governance requirements.

- Liaise with the treasurer on financial aspects.

- Ensure that the holding and data meets data protection requirements.

- Issues membership numbers and renewal forms annually.

- Liaise with regional representatives about members within their region.

- Liaise with PRO concerning membership in closed Facebook group (if agreed at AGM).

- NEW TO ROLE: The membership secretary will also undertake the role of diversity officer:

- To ensure that discrimination, harassment or victimisation in relation to any of the protected characteristics covered under the Equality Act does not occur and that diversity and equality are valued and upheld within the activities of the PN.

- The Diversity officer should know or have access to current legislation and to keep the executive committee up to date with any emerging initiatives.

BACPAR VISUAL IDENTITY POLICY

Why is our brand important?

Our brand is at the heart of BACPAR's work to promote the value of amputee rehabilitation and those professionals involved.

To be successful, BACPAR needs to effectively support our members and the profession by making sure that we are known and respected by the right people, and can influence their thinking and actions. It's our way of communicating our messages so they stand out in a clear and engaging way. The logo's we use are part of this communication.

The BACPAR logos above can be used on BACPAR publications and documents, when advertising BACPAR as an organisation and on material supported or endorsed by BACPAR such as posters, research, presentations and guidance.

It should not be used on publications other than those written or approved by BACPAR. The artwork can be supplied to members via an electronic file.

To request a copy of the logo, please contact: **bacparpro@gmail.com** with details of your intended use.

Please also include the following information:
1. Your BACPAR membership number
2. Your full name

PRIMARY LOGO

BLUE & BLACK LOGO ON WHITE

SECONDARY LOGO

WHITE LOGO ON COLOUR

ICSP REPORT

SEPTEMBER 2016

Usage:

- Around 180-250 visits per month.
- Most usage based around discussions but often these posts go un-replied except of iCSP staff or exec members.
- Bulletin issued regularly to all users – no feedback so unsure how useful people find this.
- Most visits are only for a few minutes so either looking for something specific or just 'looking'.

If you have any thoughts on how the iCSP site can be improved, or better utilised please contact **Rachel Neilson** our BACPAR iCSP Facilitator via email: **bacpar.icspfacilitator@gmail.com**.

Additionally if you feel information could be accessed in other forums such as closed facebook groups please share your thoughts so that the BACPAR exec committee can explore these options.

NEXT EDITION

DEADLINE FOR SUBMITTING CONTENT IS: **17TH MARCH 2017**

JOURNAL SUBMISSION GUIDELINES

Submitting an Article:
- Send any articles or posters as a **MS Word, MS PowerPoint or PDF file**. Please add your name, role and optional email address.

- If your article includes any pictures please send them **separately** as a JPEG or PNG file. **All images must be high resolution.** Low resolution images will be rejected.

- Send graphs as separate Excel files and name these the same as your article followed by a number in the sequence that they appear in the article (as with pictures).

Please submit your files to: **bacparjournal@gmail.com**.

SPECIALISED COMMISSIONING

SEPTEMBER 2016

Laura Burgess

**Member of Complex Disability Equipment CRG 2013 - 2016:
Member of Prosthetics Sub Group**

NHS England has re-structured the Clinical reference Groups (CRG) and the last meeting of the old Clinical reference Group for Complex Disability Equipment was held on 25/04/16 which I attended. Much of that meeting was spent discussing the re-structure; update on the microprocessor knee policy; ideas for research and an update form all the participating groups.
NHS England has identified £15.7 billion for Specialised Services. There continue to be 6 National Programmes of Care and our services continue to sit in Trauma. However the number of CRGs has been reduced to 7 now and we sit in the "Rehabilitation and Disability" CRG- there has been a merger with neurorehabiliation. There will be 8 regional clinical members of the group; 3 patient and public voice (PPV) members and 4 members nominated by affiliated organizations.
The Rehabilitation and Disability CRG covers complex rehabilitation and complex disability services.

Complex disability includes specialised prosthetics services, Environmental Controls (EC) and Augmentative and Alternative Communication (AAC) technologies. The new Chair is: Colonel Alan Mistlin, Consultant Rheumatology and Rehabilitation, Defence Medical Rehabilitation Centre and he will be in position for 3 years.

Membership of the Clinical reference Groups was open for applications through the NHS England web site and I personally did not apply for regional membership again. I will continue to be a member of the Prosthetics Sub-Group which will not meet regularly but only when there is specific work/projects to be done and I am happy to continue to report back to BACPAR in future. Also- with the affiliated organizations there is a possibility that ISPO may continue/gain membership but I am just trying to find out if this has been decided as yet and will let the BACPAR committee know the outcome.
As many of you will be aware the Microprocessor Knee Policy was agreed by the Clinical Priorities Advisory Group (CPAG) in 2015 but was not agreed due to prioritisation of NHS funding. On the 11th July the results of the annual process for deciding which new treatments and services will be made available to patients were published. 100 policies were considered – 12 new treatments/services were agreed. A further 18 were provisionally identified as affordable within the NHS resources.

Policies were first grouped by CPAG into three categories of patient benefit, and then three categories of cost. This methodology allows for the proposals to be split into five levels of cost/benefit. Policies with the greatest clinical benefit and lowest cost attracted the highest priority recommendation (level 1), while those with lowest clinical benefit and high cost attracted the lowest (level 5). These recommendations are then used to inform commissioning decisions by the Specialised Commissioning Oversight Group (SCOG), which are then ratified by the Specialised Services Commissioning Committee of the NHS England board.

In 2016 a total of 22 policies which would require additional expenditure were considered by CPAG across the five priority levels. There is sufficient funding available in the expanded specialised commissioning budget for 2016/17 to enable the proposals in levels 1-4 of cost/benefit priority to be routinely commissioned. This means that they will be made available to patients who meet the clinical criteria set out in each policy.

The "Prosthetics for Lower Limb Loss" (Microprocessor Knees Policy) was given a Level 3 status.

As you may now be aware, this investment remains subject to the outcome of a judicial review which will determine whether NHS England has the power to commission the use of antiviral drugs for the prevention of HIV, given before exposure (known as PrEP, or Pre-exposure Prophylaxis) to individuals who are at high risk of contracting the virus.
On the 10th August 2016 a 45 day public consultation on a proposed clinical commissioning policy proposition on pre-exposure prophylaxis for HIV started to test the policy with wider groups of stake holders. The results of this review may require the prioritization process to be run again – so we all need to wait...

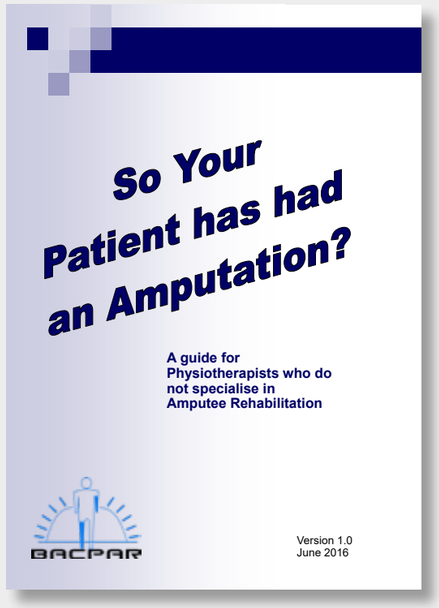
I will continue to keep you all informed as activities progress but that concludes my report at present.

NEW BACPAR LEAFLET AVAILABLE FOR DOWNLOAD:

http://tinyurl.com/hwdk9dj

There are approximately 7,500 lower limb amputations a year in the UK. 85% of these are due to Peripheral Arterial Occlusive Disease, and over 50% of these have Diabetes.

The aim of this guide is to provide physiotherapists with a variety of resources to support you in clinical practice in non-amputee rehab specific roles. It will signpost you to the most relevant and useful resources, as well as those more local to you and your patient.



PINBOARD

UPCOMING AMPUTEE CPD EVENTS

I ♥ BACPAR

BACPAR 2016
Annual National Conference
Thursday 10th November
www.bacpar.csp.org.uk

Conference Programme
"Supporting the Challenging Patient"

Thursday 10th November 2016

08:30 Registration & Exhibition Viewing (with Tea & Coffee)

09:15 Welcome to Conference – Housekeeping

09:30 **Session 1**
'Hip disarticulation Rehabilitation and new socket technology'
Lyndzy Holding
Prosthetist – Steepers – Aintree

'Physiotherapy rehab of a hip disarticulation'
Helen Scott
Clinical Lead Physiotherapist, WESTMarc, Scotland

10:15 **Session 2**
'ITAP research update'
Jennifer Fulton
Physiotherapy Clinical Specialist in Amputee Rehabilitation, Royal National Orthopaedic Hospital, Stanmore

Session 2A
'PEARL trial update'
Kate Primett (and Richard Leigh – Lead Podiatrist)
Clinical Lead Vascular and Amputee Therapies, Royal Free London NHS Foundation Trust

11:00 Refreshments & Exhibition Viewing

11:30 **Session 3**
'Exercise for falls prevention in Hull – an update'
Dr Natalie Vanicek
Reader in Clinical Biomechanics, University of Hull
Zoe Schafer
PhD student within Sport, Health and Exercise Science at the University

12:15 AGM

12:45 Lunch and Exhibition viewing

14:00 **Session 4**
'Let's dip into Psychology to achieve positive outcome – comfort and confidence'
Candy Bamford (Counselling, hypnosis, EMDR)
Clinical Psychologist, Lancashire Teaching Hospitals NHS Foundation Trust

14:40 **Session 5**
'Non-diabetic management of the remaining foot'
Bill Law
Senior Podiatrist Biomechanics, The Royal Wolverhampton NHS Trust

15:15 Refreshments & Exhibition Viewing

15:45 **Session 6**
'Stubbies use in civilian population: case studies and open discussion'
Gayle Arthur
Prosthetist – Steepers – Essex
Eleanor Bacon
Physiotherapist – North East London NHS Foundation Trust

16:30 **Session 7**
The management of Residual limb and scarring
[Speaker to be confirmed]

17:15 **Session 8**
'The Effect of Ageing'
Louise McGregor
AGILE Chair - Physiotherapist

'Prosthetic limb wearing in an Ageing Population'
Rachel Neilson
Academy Prosthetist, Ottobock

18:00 Conference Close

PARASPORT SPECIAL EDITION

With the 2016 Paralympics this September bringing to the forefront the fantastic achievements of our paralympians not just in parasport but in day to day life, it seemed fitting in this edition to celebrate the work of our BACPAR members in health promotion, sport, exercise and functional rehabilitation for our patient group.

We hope you enjoy the parasport special edition insert!

PRELIMINARY RESULTS FROM A FALLS PREVENTION EXERCISE PROGRAMME FOR LOWER-LIMB AMPUTEES IN HULL

Z. Schafer, A. Lee, A. Hancock, A. Salawu, H. White, & N. Vanicek

INTRODUCTION

Falls are a problem for amputees, 52% of lower limb amputees fall each year, and 75% fall two or more times. There is currently no individualised falls prevention exercise programme that has been quantitatively evaluated in the literature. The aim of this study is to undertake a targeted exercise programme in lower-limb amputees and evaluate its effectiveness at improving daily function and performance, and ultimately falls prevention.

METHODS

Eleven lower-limb amputees have so far been recruited to the study, and have been allocated into two matched-groups based on age, level of amputation and gender; an exercise group and a control group.

	Gender	Age (Years)	Height (cm)	Mass (kg)	Cause of amputation	Level of amputation	Time since amputation (years)
Exercise Group	M = 3	64.8	171.4	91.4	Vascular = 2	TFA = 3	13.6
	F = 2	(±10.1)	(±7.7)	(±15.4)	Trauma = 1	TTA = 2	(±20.0)
					Other = 2		
Control Group	M = 5	64.8	173.0	91.0	Vascular = 2	TFA = 3	17.5
	F = 1	(±19.4)	(±15.3)	(±25.0)	Trauma = 2	TTA = 3	(±18.0)
					Other = 2		

Table 1. Table showing demographic data of participants

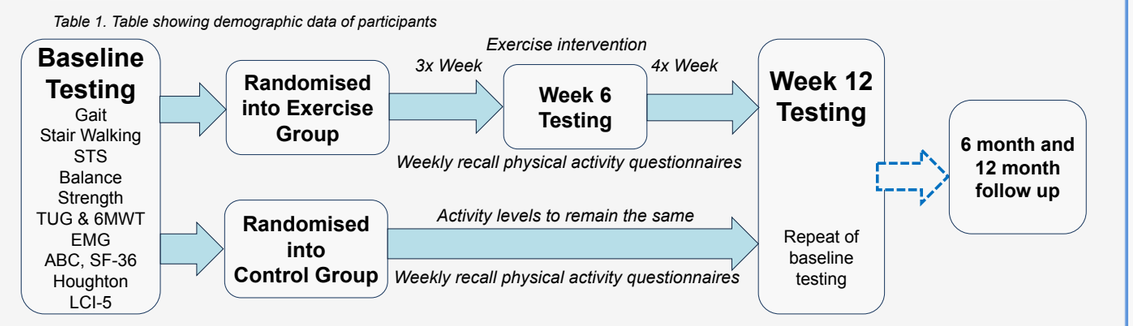
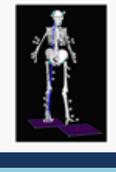


Figure 1. Flowchart demonstrating methodological order of study for participants

RESULTS

Data Collection and Analysis is still ongoing. Baseline results are presented below.

	ABC	LCI-5	TUG (s)	Level Gait Speed (m/s)	Houghton
Exercise	67.1	40	12.4	0.83	8.4
Group	(±22.3)	(±8.8)	(±3.9)	(±0.28)	(±3.1)
Control	75.8	50	12.8	0.87	9.2
Group	(±20.0)	(±5.6)	(±3.7)	(±0.31)	(±1.7)



CONCLUSIONS

The study is still ongoing, however participants were asked to write one sentence in their final group exercise session about how they have found it. Many enjoyed the social aspect and felt more confident and fitter, some quotes are shown below.

'…much more relaxed way to do exercises, a very enjoyable experience…'

'I feel fitter, lost weight, feel more confident…'

'Have enjoyed it all, especially meeting others with missing legs…'

Images used with consent of participants

UNIVERSITY OF Hull
Hull and East Yorkshire Hospitals NHS Trust
BACPAR
HELP for Health
Helping East Yorkshire & Lincolnshire People

RETURN OF THE SUPERHUMANS

Jamie Gillespie

Prosthetist, Pace Rehabilitation

Andy Lewis

Paratriathlete

Time seems to have flown by since London was preparing for the 2012 Olympic and Paralympic Games. The build up to Paralympics was very impressive driven in part by Channel 4, as they launched their Superhumans campaign.

I recall rushing from work, heading to the Olympic Park, with noticeable excitement within the crowd on the train. The atmosphere within the stadium was electric. Many stars of the Paralympics became household names and ambassadors for their sports for all the right reasons.

Now, back within clinic, it is interesting to reflect on what effect the 2012 Games has had on the services we deliver. At Pace Rehabilitation, I personally felt a buzz building up to the 2012 games during day-to-day clinical practice. We were working with a higher than normal number of amputees and their sports specific prosthetic devices. These people were not necessarily those chasing Paralympic fame, but those who were very keen to be involved in recreational sport and fitness. In the week following the games, we had 6 individuals phone us to discuss prostheses for sport. Of our clinical caseload, we continued to maintain and improve designs, where possible, for a committed few who were seeking greatness. However, over recent years, there appears to be a need for more diverse designs of sporting prostheses. Our support for those competing in cycling and triathlon has kept us very busy, as well as other sports scheduled to become Paralympic events, such as Badminton. In response, we have invested a great deal of time and resources into research and development efforts to optimise designs in the hope of achieving marginal gains.

One area where we have seen increasing demand for our services is the supply of paediatric high activity prostheses. Restrictions within the NHS appear to prevent the supply of these devices for those looking to play, move quickly and run on lightweight and responsive designs. Often these are not sports specific prostheses, so we refer to them as play limbs. This group of children and teenagers look up to our Paralympic athletes with awe, with many aspiring to compete at the highest levels of sport. As the school summer holidays begin, my work over the next weeks will include supporting growing children, and almost all will enjoy showing me how quickly and well they can run when they attend.

Another influencing factor, related to sporting prostheses, has been the Invictus Games. The fantastic coverage of our wounded veterans competing, both in London and Florida, has inspired others. We are now working with more veterans than we have previously, as we supply aids and devices to assist with sport and fitness. We are certainly challenged when preparing unusual but effective designs to this group of athletes with multiple injuries.

During the build up to the Paralympic Games in Rio, there has been a whiff of anxiety as athletes wait to learn if they have been selected. The business of Paralympic sport is apparent, the standards are extremely high, and selection cannot be taken for granted for those involved. At Pace, we share their joy when we learn, one by one, that athletes have made the team. Only this week the new Channel 4 Superhumans advert was launched and already the tune is being sung and hummed around the building.

Although the Games are not as close to home this time around, there is certainly excitement in the air. We feel honoured to play a small roll when helping not only the various Paralympians we support, but those of all ages who are keen to be involved in sport at all levels.

Clare Cunningham

Paratriathlete

RIO 2016: A PROSTHETIST'S VIEW

Rachel Neilson

Academy Clinician

rachel.neilson@ottobock.com

Photo credit: Ottobock

This summer I was lucky enough to be part of a 100 strong team of technicians from 31 countries who spent 2-3 weeks supporting the athletes of every competing country.

Ottobock has been a great supporter of the Paralympics for many years and has provided technical services to the games since Seoul in 1988. This service is provided free of charge to all athletes and repairs prostheses, orthoses, wheelchairs and all manner of other custom devices which are broken or need adjustment throughout the Games. This year's team was made up of Prosthetists, Orthotists and Wheelchair engineers from all around the world and all with unique experiences to add to the team. This was my 3rd Paralympic experience, having previously worked in the team at both London 2012 and Sochi 2014, and it was great to be working alongside some old friends but also to meet so many new people and share our time, skills and knowledge with each other.

We are lucky enough to have a full workshop facility in the Paralympic village, complete with fitting rooms, machines and workshop space, as well as a warehouse stocked with thousands of spare parts and materials to help us repair everything from wheelchairs to throwing frames and even to make a new orthosis or prosthetic socket if necessary. The first job for those members of the team who arrive before the Games start is to unpack and (sometimes literally) build our workshop! Then the real work starts. We work in a shift based system so that there is help available from 7.30am until 11pm. Even emergencies overnight will be dealt with by the team, there is no job too big or too small for us...

Repairs can vary between simple adjustments to improve comfort to almost re-building an item that needs significant repairs. As venues for different sports were so spread out across the city, sometimes more than an hour's travel from the main workshop in the Paralympic Village, we had members of the team at most sites providing on site repairs and help as needed. Here are two of my colleagues working during of our days at the Wheelchair Tennis arena where we mainly dealt with tyre issues, changing tyres, inner tubes and pumping up tyres to the correct pressure to give best on-court performance.

During the three shifts I spent in the wheelchair tennis arena we had visits from most of the teams competing in that event. There's often a perception, particularly in the media, that western countries with good healthcare like Team GB, USA, Australia etc. should be less in need of our services than teams from places such as Congo, Sri Lanka, Zimbabwe and others. Actually this isn't the case. Yes, of course we see athletes from countries where provision isn't what it could be, but over the entire event we will see athletes from most countries and proportionally more from larger teams, so those such as the UK and USA as well as China and Australia and of course Brazil, were frequent visitors to our workshop. We also support the officials, coaches and teams working with each country's athletes.

The two weeks I spent in Rio were full of interesting jobs and some seriously hard work not to mention some fun along the way too...

Sewing was a major theme for me this time, a long way from my usual field of work as I took on repairs to gloves, wheelchair seats, straps for wheelchairs and orthoses as well as cushion covers for seating and much more. Great British Sewing Bee eat your heart out! But variety is the spice of life and I also had plenty to do with other tasks including delivering a brand new prosthesis to an official from Democratic Republic of Congo as well as working on some upper limb prostheses with colleagues. Wheelchairs are also something that I don't normally have to deal with in my everyday job but I was happy to get stuck in with all sorts of things from changing tyres to helping problem solve more complex problems like this electric wheelchair which had broken the mechanism which helps it rise and lower to assist transfers for its user!

The Games also give lots of other opportunities too. When not working I had the opportunity to see a number of events including swimming and wheelchair basketball. The atmosphere in the Olympic park is electric and the Brazilian people really made the Games the most successful ever and provided loud and enthusiastic support for every competitor no matter what their nationality. We also stumbled upon opportunities to meet a number of well-known faces such as Adam Hills, RJ Mitte and Johnny Vegas as well as being part of the studio audience for The Last Leg!

It is absolutely brilliant to see the Paralympics getting such a high profile on UK media and the UK members of the team were often told how much other countries were amazed by the UK media coverage and wished the same was available in their home countries. Media attention works both ways though and it can be hard to carry out a tricky repair whilst there is a camera only a few feet from you or someone is asking you questions about the service. Multitasking becomes a vital skill!

For me, as a prosthetist, one of the highlights of the Games is seeing athletes achieve their potential. Once you've repaired an item for an athlete, even if it's as simple as replacing the webbing and Velcro on this strap for a Japanese Wheelchair Rugby player (who I later watched play a nail-biting semi-final match), you are somehow invested in their journey and their success becomes your success too.

Commiserating with the Brazilian team after their match with Team GB

On set at The Last Leg

Before

After

I was incredibly lucky to have been working with one of Team GB's gold medal winning para-triathletes, in the run up to Rio and to see him achieve his dreams then share that with him afterwards was an amazing feeling.

Being part of the technical service team, over the past 5 years and 3 Paralympic Games, has been an amazing opportunity for me. It has given me confidence in my abilities and taught me to push myself, to work in a team (when sometimes you don't even speak the same language...), to come up with creative solutions and to learn from others. Spending time with a group of top class clinicians from around the globe has really broadened my horizons and the shared knowledge and experiences are something I can carry over, back into my job here in the UK. It's a privilege to serve these amazing athletes who have worked so hard over the last 4 years to achieve their best and I really hope I can continue to be part of this in years to come.

NORTHERN IRELAND SPORT

AMPUTEE ABSEIL

On the 12th November 2015, 18 amputee patients and Staff from the Regional Disablement Services in Musgrave Park Hospital abseiled down the Europa Hotel as a Fundraiser for The MITRE Charity. BAC, Belfast Activity Centre provided all the training and equipment and supervision required for the Abseil. It was a drizzly morning when we all arrived for registration but brightened up for the event itself. There was much discussion as to whether limbs should be worn or not and for some folk getting onto the roof in the first place was a challenge in itself.

One abseil rope was dedicated to the Amputees as it was felt they may need more attention than the rest of us. In the end the safety officer said he was very impressed by how calm they all were and that there was more fear expressed by the non-amputees. The Abseil raised a fabulous £6004.49 for MITRE which is a charity dedicated to improving patient experience and facilities in Musgrave Park Hospital. They recently donated £20,000 towards extending and refurbishing the Physiotherapy Gym, corridors and patient waiting areas in RDS.

Carolyn Wilson

BACPAR Regional Rep Ireland

carolyn.wilson@belfasttrust.hscni.net

SPORTS TASTER

On 22nd June 2016 we held a sports taster session for Amputees in the Mitre Gym in Musgrave Park hospital in Belfast.

This event was run in association with Disability Sport NI, a local charity improving the health and wellbeing of people with disabilities through sport and physical recreation.

We enjoyed 2 hours of wheelchair chair based activities (conditioning & skills) and fun games related to wheelchair basketball and rugby. There was also an opportunity to try Badminton, Tennis, and Boccia for anyone who wanted to try those sports.

Disability Sport NI provided us with a selection of sports wheelchairs for patients to try. Staff were also able to participate and experience the difference in using sports wheelchairs. There was great patient versus staff competiveness and very positive feedback.

S.E. LONDON TENNIS

Adam Letts

Advanced Amputee Rehabilitation Assistant, ARU

As a therapy team at the Amputee Rehabilitation Unit (ARU) Guy's & St Thomas' NHS Foundation Trust, we are constantly searching for exciting and creative ways to motivate our patients. When David Hardman, Disability Tennis Development Manager for The Tennis Foundation approached the ARU, we were presented with a great opportunity to introduce a new dimension to our therapy sessions.

The Tennis Foundation Disability Development Programme's mission statement is to inspire and engage more disabled people to be involved in tennis, whatever their ability and background, providing opportunities for all and credible pathways for the most talented. It aims to showcase tennis as an inclusive sport that can be played standing up using a prosthesis or in a specialised tennis wheelchair.

Mr Hardman provided the ARU with inclusive equipment bags and ran a session for patients and staff demonstrating the use of this equipment. Of the session, 91 year old Jane said "It was marvellous! Good because I exercised my arms, my legs and my tummy all at the same time. I enjoyed it because it was exercise without feeling like I was doing exercise", while 21 year old Syeda felt "the afternoon gave me the confidence to think about getting into sports. It was the first time since being ill that I've done sport. I love it now!". Even the more cynical patients were persuaded. Those who had previously not felt sport was an option open to them, found enjoyment in the speed, skill and sociability of tennis. Gary surprised himself, claiming "It was a great day, really enjoyed it, they were very good at getting us involved. I didn't think I was any good at racket sports- I'm used to getting thrashed, but I would definitely get involved now".

Having access to tennis equipment and new ideas of how to use it has allowed our therapy team to challenge patient's balance, endurance and coordination in a new and fun way, both in one-to-one sessions and within group work. But perhaps even more importantly, using sport within our therapy allows us to remind patients that opportunities to access sport are still available post-amputation. In the world of tennis, disability does not necessarily restrict participation and, for those who develop a taste for the sport, we are now able to signpost them on to local tennis centres via links with The Tennis Foundation.

For further information or to arrange an introductory session, please visit: **www.tennisfoundation.org.uk**

ARU GARDENING GROUP

Joe Scoble

Advanced Amputee Rehabilitation Assistant, ARU

At the Amputee Rehabilitation Unit (ARU), GSTT we are using our award winning garden as an important resource in the rehabilitation process. This year we have developed a gardening group therapy session that appeals to both inexperienced and experienced gardeners which involves projects such as, planting, propagation and growing fruit.

With support from Head Gardener Tony Danford we are in the process of creating of a new herb garden which the patients have been asked to design and help create. Therapeutic horticulture gives patients an opportunity to share experiences, form friendships and learn practical skills that help promote independence. This new garden project will provide patients with the opportunity to improve with their balance, wheelchair skills and functional strength.

The gardening group has already proven to be a success with our patients since its start this spring and we are currently collecting feedback on how it can further improve and help promote future health benefits for those who have experienced an amputation.

Gardening is used at the ARU as an alternative form of exercise for patients who seek a more functional rehabilitation approach, and integration into usual activities of daily living in order to increase confidence and hope for their new life as an amputee.

SCOTLAND'S AMPUTEE SKI DAY

Louise Whitehead

Vascular & Amputee Physio Team Lead

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Snow Factor was the place to be on Saturday 17th September 2016. Nine young amputees from across Scotland turned up to have a fun day on the slopes!

Louise Whitehead, Amputee Physio Team Lead in Ninewells Hospital, organised the day and was helped by fellow AHP's Ali Currie, Paediatric Physio, and Kenny Moyes, Orthotist; along with a few other volunteers and Louisa Oram from DSUK.

The day was funded by Finding Your Feet, a charity set up for amputees by Corrine Hutton, (a quad amputee due to septicaemia) promoting reintegration back into sport & activity.

Although 3 of the kids had skied a few times before, most were complete beginners. The progress they all made was fantastic!

Hannah who has a knee disarticulation amputation, had tried 3 track (skiing on one leg with outriggers) a few times but had lost her confidence after a bad fall. Using her prosthesis, she gained in confidence and was all smiles!

Ryan, 6 year old with a knee disarticulation prosthesis, who had started off in a bi- ski at Glenshee with Disability Snowsport Scotland, progressed onto stand up skiing, in between snowball fights!

The 5 beginners in the afternoon, mostly transtibial amputees, (one congenital upper limb amputee), started off on the nursery slope learning to side step up, slide & snow plough stop! Soon they were using the rope tow, turns were carved and Liam & Ryan progressed onto the main slope mastering the Poma drag lift by the end of the day!

Ailsa, age 10, made fantastic progress and despite a few hairy moments falling off the rope tow, she persevered and was skiing independently after an hour! Her dad was beaming with pride and as a keen skier himself, asked about more sessions at Glenshee and Braehead...

Everyone had a fantastic day & we are looking forward to the next one!

SHERWOOD'S AMPUTEE WHEELCHAIR GROUP

Clare Singh

Specialist Senior Physiotherapist in Amputee Rehabilitation

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Suzanne Temple

Senior Physiotherapist in Amputee Rehabilitation

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Background

The group was established in September 2014 following identification of a gap in the therapy service for patients who did not progress to, or were no longer using lower limb prostheses following major level lower limb amputation.

Group Aims

- Maintain independent function.
- Prevent contractures and risk of pressure sores.
- Prevent hospital readmissions.
- Promote social interaction.
- Maintain or improve transfer ability.
- Weight management.
- Improve general health and well being.
- Increase knowledge and awareness of a healthy lifestyle.

Referrals

Referrals to the group are made via local GPs or therapists treating lower limb amputees within Sherwood Forest Hospitals NHS Foundation Trust.

Assessment

Attendees have a joint assessment prior to attending the first session with an occupational therapist and physiotherapist and are reviewed annually. The assessment includes:

- Subjective history.
- Objective assessment including: functional abilities, joint range of movement, muscle strength, transfer ability, weight, number of falls in the past year, hospital admissions in the past year, reported pain levels & diabetes control if applicable.
- Goal setting.
- Complete the Hospital Anxiety and Depression Scale (HADS) and Quality of Life (QOL) scales.

Group Structure

The group runs once monthly and sessions last 2 hours. Staff to patient ratio is generally 1:2 or 1:3 and we see patient numbers of up to 10 attendees. The session is broken down into several components and all activities are completed with attendees remaining in their wheelchairs (manual and powered).

Session components include:

- Introduction and catch up.
- Physical chair-based warm up led by a physiotherapist.
- Physical activity session e.g. cricket, rounders, parachute, throw/catch, relay races.
- Relaxation led by an occupational therapist.
- Refreshments and social opportunity.

We also invite guest speakers to sessions throughout the year, which have so far included a diabetes specialist nurse, dietician, wheelchair basketball engagement officer and local physical activity scheme coordinator.

We ask group attendees to suggest relevant topics for guest speakers which they feel would be both enjoyable and beneficial for the group.

Audit and Feedback

A patient satisfaction questionnaire was recently completed with the group, for which we achieved an 80% response rate. Group attendees were asked to rate and make comments on the structure and content of the sessions and also make any suggestions for future improvement.

80% of attendees were 'delighted' with the group in general and the other 20% were 'pleased'.

Examples of attendees' comments include:

"we are told things we really need to know which can change our attitude"
"pleased (to) meet new people with similar disability"
"it's good fun and nice to meet new people"

The most useful aspects of the group were described to be:

"learning about medication and techniques for doing things"
"the friendship and the exercises"
"the encouragement to be active"

Annual review case study

An attendee at their one year review showed:

- Increased bilateral hip joint range of movement (by 10o on the left and 20o on the right) and muscle strength (from 3-4/5 to 5/5 globally).
- No hospital admissions in the past year.
- Improved transfer ability no longer requiring the use of a transfer board.
- Improved quality of life score.
- Significantly improved participation in social activities, hobbies and interests including volunteering at a local lunch club.

We continually strive to evaluate and improve the group for its attendees and welcome feedback to inform future structure, access, attendance and enjoyment. We have received praise from our regional prosthetic centre who would like to replicate and offer this group for their local service users. We are extremely proud of how the service has evolved thus far and look forward to sustaining its future.

MANIC MARAFUN 2016

Kiera Roche

Chief Executive Officer LimbPower

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The 27th August 2016 saw Stoke Mandevlle Stadium in Aylesbury hosting the annual LimbPower Manic Marafun fundraising event. LimbPower is a National Disability Sports Organisation for people with limb impairments, which offers events and encouragement to those with limb disability.

The Manic Marafun has always been a good family day out, with a difference, whether you consider yourself a competitive sports person or a rather more reluctant participant, and 2016's event became bigger and better. The 26.21875 miles of the marathon were divided into 27 separate legs (each leg being equal to four times around the stadium) with each leg completed by a sponsored individual, family or group, fancy dress was optional as was mode of transport, although there was a definite theme of Star Wars for 2016. This year didn't see any shortage in original methods of covering the required distance: From Darth Vadar on foot to a Teletubby riding a handbike, and just about everything else in between. It was particularly refreshing to see the wide age range taking part, from a young amputee's younger sister, still in her pram, right the way through to, shall we say, slightly more senior participants. From all walks of life and all parts of the country, everyone attending had one thing in common, either they had a limb disability or supported someone with a limb impairment.

Some individuals went above and beyond in more ways than one. Several participants completed the full marathon, which for some was quite a challenge. However there was no shortage of encouragement and load cheers with every lap achieved from the spectators. Other's raised phenomenal amounts of money and a fair few had travelled quite some distance to attend the day.

This year's Manic Marafun proved to be a particular success and has to date raised over £7,000 towards the charity but probably more important is that everyone had a great time. It can't be emphasised enough how important it is to get out there and meet other people dealing with similar challenges to yourself. The Manic Marafun has been a great opportunity for those who have benefitted from the charity to support it and hopefully help other people and their families. There was a huge amount of bonding and new friendships made this year, the children in particular, taking everything in their stride - as they do, enjoyed the entertainment and of course the rather delicious picnic lunch provided by LimbPower for all those attending.

The funds raised will help to enable LimbPower to offer a wider range of opportunities and support for those individuals who have either experienced an amputation or have been born with a congenital limb disorder.

With requests already coming as to what date we will be holding the Manic Marafun in 2017, although we are still counting the money from 2016, we would like to thank all participants, their supporters and anyone connected with the incredible success of this event. Anyone interested in learning more about this and other LimbPower events should visit:

www.limbPower.com - LimbPower is also able to offer many other services and we would be happy to help in any way we can.

REGIONAL BACPAR STUDY DAYS

Trent Regional Meeting - July 2016 Nottingham Mobility Centre

Chris Walker

Trent Regional Rep

This was the second regional meeting of the year in which Physio's from different Trusts and companies attended to share practice and information. The main items for discussion were regional audits, outcome measures and community training on prosthetics and basic rehab. This final topic was the topic that took up the majority of the meeting and captured most enthusiasm (not saying there wasn't huge excitement over audits and outcome measures – obviously!)

The Trent region is proposing to put together a basic training package that can be delivered to community staff in the form of a short face to face session. The premise behind this is to try and engage and empower community therapy and support workers to try and continue rehab into the community, along with pick up problems early and know when to refer in to the prosthetic centres. Individual teams are already doing this, however, regional training will hopefully help increase consistency, quality and also pool best practice assessment and treatment ideas. It is hoped that this training could be trialled early 2017.

The Trent region is seeking help from all with regard to creating a contacts list for therapy teams within the Trent area. Also, if you have done similar training in your areas then please get in touch. If you have any lists/contacts/ideas that you would like to share then please contact **bacpar.trent@gmail.com**.

The meeting concluded with a talk by Maria Goodwin from British Wheelchair Basketball. This helped highlight the sport of wheelchair basketball, by giving insight and practical demonstrations along with helpful contacts for referral of interested patients. For more details visit: **www.britishwheelchairbasketball.co.uk**.

Dates for the diary
Proposed next meeting for Trent BACPAR members:
Tues 22nd Nov 2016, 1:30am – 4pm, Venue TBC
Nottingham Mobility Centre Link Day
(Free to NHS staff, places limited)
Thus 17th Nov 2016, 8:30am – 4pm
Contact: **hayley.conroy@nuh.nhs.uk**

North Thames - June 2016

Kate Primett

North Thames Regional Rep

On Monday 20th June 2016, approximately thirty Physiotherapists, ranging from Assistants and Students through to Senior therapists, attended the BACPAR Amputee Gait Analysis Study Afternoon held at the Royal Free Hospital.

The afternoon was facilitated and organised by Kate Primett (Clinical Specialist Physiotherapist in Amputee and Vascular Rehabilitation at the Royal Free London NHS Foundation Trust), and included presentations and interactive sessions with other Vascular and MSK Physiotherapists from the Royal Free Hospital, and Prosthetists from Charing Cross Hospital. There was also the opportunity to speak to and analyse gait patterns of established Amputee patients, who

very kindly gave their time to come in for the study afternoon.

Following a welcome and introduction from Kate Primett, we were given an informative presentation on the Normal Gait Cycle by Hannah Read (Vascular Band 6 Physiotherapist at the Royal Free Hospital). The learning outcomes of this presentation included reviewing the gait cycle- its stages and the body movements and muscle activity involved in each stage, as well as understanding what 'normal' gait is.

This was then followed by an interactive Gait Analysis session with Nick Lyne (Clinical Specialist MSK Physiotherapist at the Royal Free Hospital). During this session, we were able to observe an individual walking on a treadmill, and discuss how we could analyse their gait dynamically from different planes, observing muscle activity during the different gait stages.

After observing the individual's gait on the treadmill, Nick then discussed how to examine certain muscle groups which may be causing particular changes to the dynamic gait cycle. This included demonstration of specific Musculoskeletal tests to assess muscle lengths and strengths. This section of the presentation was extremely informative, and I think a good revision tool for many of us!

Nick also discussed the current technology that is available to analyse gait, ranging from videos and computer apps, through to the more advanced external force plates and gait laboratory cameras and reflective markers.

Kate Primett then presented an informative and interactive presentation on Amputee Gait Deviations. This session involved watching and discussing a variety of videos of both Transtibial and Transfemoral Amputees mobilising with a variety of gait deviations that we may commonly see within our patient caseload, such as vaulting, knee hyperextension, and exaggerated lordosis. Interactive discussions followed the observations regarding what may be causing these deviations-could it be muscle imbalance? Is there an issue with the prosthetic alignment?
Following a short break, we then returned and divided into two groups (each group completed both sessions).

Group one began with a session with both Kate and Nick focussing further on gait analysis of Amputees and exercise prescription. During this session we had the opportunity to observe the gait of two Amputee patients who use a prosthesis, using the knowledge and skills we had gained earlier in the afternoon to assess their gait pattern. We also discussed as a group and then certain members of the group were able to demonstrate particular treatment options they may use to help improve the gait pattern of these patients. For example, is there a muscle imbalance and if so, why? How might you strengthen or lengthen a particular muscle? What exercises might you prescribe and how would you progress these? It was a great opportunity to see and discuss how other healthcare professionals treat certain problems and prescribe different exercises, which we may not have considered before.

Whilst group one were in this session, group two met three Prosthetists from Charing Cross Hospital in the study room next door. The aim of this session was to further discuss gait analysis of individuals who wear a prosthesis, focussing on how gait patterns can change when prosthetic alignment changes. For example, what may cause excessive knee flexion of a Transtibial Amputee when mobilising with a prosthesis? As well as being aware of potential muscle imbalance or contracture, discussion was mainly focussed on how altering certain alignments of the prosthesis could also affect this. We had the opportunity to observe a Transtibial Amputee walking with certain adjustments made to their prosthesis, demonstrating how even a small adjustment can significantly affect their comfort and gait pattern.

The afternoon was highly interactive and informative, and a variety of material and subjects were covered in a short amount of time. It was a wonderful opportunity also to meet other therapists working within Vascular and Amputee Therapy, both within other acute Trusts as well as out in the community. A very big thank you to Kate Primett for organising and facilitating a highly informative and interactive afternoon, as well as to all of the other healthcare professionals and patients who gave their time to help our learning and improve our skills in Amputee Gait Analysis.

SPARG Conference - June 2016
Not The Last Leg

Kathryn Osborne
North Cumbria University Hospitals

When the information leaflet arrived in the department, my boss passed it to me saying "this looks your thing", when I looked at the details it did look my thing. And with Glasgow being just over an hour away on the train it was a pleasure not to have to travel the length of The UK for training, also being more hopeful without overnight stays and long journeys I would be granted study leave for the day.

As a Rehabilitation Exercise Practitioner working as part of a small MDT, my area of specialism is functional rehab and working with amputees to get them back to functional activity around the house, at work and within physical activity and sport. So the conference title and marketing had my attention straight away. On contacting Westmarc, Nikki and the team were very happy to have me come "over the Border". The pre-event information gave regular updates and we were informed we would be welcomed with coffee and pastries, always a winner! Nikki and her team were very friendly and informative as we registered in the morning, knowing I was one of only two therapists who travelled from England (Mary Jane Cole being the other), quickly introduced me to some therapists from Westmarc and made me feel at home.

The day started with an interactive spot quiz to find which of our rockets would touch down first, this brought the competitive spirit with Alistair (Blatchford Rep) proving the most competitive. The quiz was to be a theme of the day, with many of the questions then answered and explored as the day went along. Another theme of the day was a short video clip of patients saying how they felt post amputation. One gentleman hit home with "you think that you might get cancer but you don't ever think you will lose a leg". Another lady said "they tell me I will get there, where is "there" it sounds so magical", a phrase we use day in day out, but what does it mean? I have stopped using this term since the conference as she hit home with me so much, I actually kept thinking about that statement on the train home.

Topics covered included type 2 diabetes including care of the diabetic foot, patients with dementia and strategies to allow appropriate treatment plans for this group of patients, co-morbidities and how they impact on the rehab of our patients, sleep disorders & body image. The day ended with an inspirational talk from a veteran & Invictus Games Gold medallist Scott Meenagh.

When Dr Christine Steel started her talk on dementia by asking us to draw the face of a Penny, other than my lack of artist skills it seemed quite an easy task. Much debate of "which way does the Queen look" and "it's a gate on the back" "No, it's a lion" followed around our table. Try it now, can you recall the details of a Penny?

As it turns out none of us were able to correctly drawn or describe an object we have seen most days for most of our adult lives; this we were informed was similar to how one of our patients who has dementia would interpret everyday life and rehab sessions. The mix of "practical" and theory was well used by all speakers through the day.

For me, the highlight of the day was the final speaker, Scott Meenagh. Coming from a background in competitive sport, both as an athlete and clinician I am fascinated by what makes fellow sportsmen tick; it's something I can't get enough of and I spend my free time reading autobiographies, watching motivation and training videos on YouTube, reading articles. Scott, a bi-lateral transfemoral amputee as a result of stepping on a IED while on patrol in Afghanistan, quickly had the audience hanging off his every word, taking us from the verge of tears to fits of giggles. Talking frankly and openly about the daily physical and psychological struggles he (and our patients face) "I can climb a mountain unaided, but need helped up this step". While Scott strives to reach the top of elite sport and "to be the best he can be", much of what he spoke about is applicable to all of our patients. We are often guilty of not being patient centred in our goals, yes we all ask a patient what their goals are but I know I often think "they can't do that".

The day closed with another set of patient videos, leading on from Scott's message "to be the best you can be" we saw all of the patients achieving their goals; getting on a bus, driving, going to the shops, going upstairs and playing with Grandchildren all achieved. The video interludes really were a great addition to the day and linked to the topic we were about to discuss, I am sure we all had a patient like Jack or Margaret and this allowed me to engage more with each of the speakers and thinking "that sounds just like Frank, I will try that with him on Monday".

I would strongly recommend anyone to attend the study days and conferences SPARG put on. They are very well organised and friendly, the speakers were well renowned in their fields, Glasgow is very easy to get to & the location was only a 10minute walk from Central Station and most importantly, the welcome pastries and hot buffet lunch were very tasty!

West Midlands Study Day - June 2016 Innovations in the Management of Diabetes

Kim Ryder

West Midlands Regional Rep

On the 9th June the West Midlands region hosted its annual study day. This year I decided to move away from the prosthetic themes that I have used for previous events and chose the topic of Diabetes. This was, in part, because I seem to have had a lot of trauma patients come through my clinics in Shropshire who are diabetic as an unfortunate coincidence, but for all of these patients their diabetes has played a huge part in governing the success of their prosthetic rehabilitation. I had also started to notice more and more patients coming to me with technology that I was not very familiar with (such as the insulin pumps and the Freestyle Libre), so I decided to do a bit of reading around the topic – only to find out that there was an awful lot more that I didn't know enough about...and hence the topic for the event on 9th June was born.

This year we were successful in getting some sponsorship for the event from Roche (who make one of the insulin pumps), from Abbott (who make the Freestyle Libre) and from Juzo, so I was able to run the event for the bargain price of £10 for members and £25 for non-members and this included lunch and refreshments.
To be honest I wasn't sure how much interest there would be in a topic like this, but how wrong I was! 44 people come along and I even had to turn people away because the room would not accommodate any more. Of the 44 delegates, 30 of these were BACPAR members and 14 were non-members and we had people travel from as far afield as Exeter and Durham so there were a good mix of clinical skill levels in the audience.

Dr Anath Viswanath (Consultant & Clinical Director) from the Wolverhampton Diabetes Centre started the morning with an overview of diabetes and its complications, and the sobbering thought that 80% of the diabetes budget is spent on treating complications and with 10% of the NHS budget being spent on diabetes and its complications. Pam Williams from my own trust (Shrewsbury & Telford Hospitals) talked about haemodialysis and its implications for rehabilitation after amputation and helped us understand why the prosthetic outcomes of dialysis patients are often so poor. We then had 2 talks from our commercial sponsors – one from Roche who gave us a very good overview of the Insulin pump systems and the selection criteria etc, and one from Abbot who introduced us to the Libre, which is a revolutionary way to check blood glucose without finger pricking. Technology is moving rapidly in this area so one day patients will have subcutaneous glucose monitors in situ which connect to their smartphones via Bluetooth. Do go and have a look if any of your patients are fitted with one. As yet the NHS will not fund the consumables for the Libre but given the cost of poor compliance with blood glucose monitoring then it seems only a matter of time before the Libre is seen as a cost effective way to get patients to check their blood glucose levels regularly and, in so-doing, to reduce the incidence of complications arising from poor compliance. One of my own patients had one funded though his workplace accident and it showed that he was regularly in hypo for 4 or 5 hours at night and his diabetes nurse used the information on this continuous monitoring system to optimise his insulin doses and times.

Sonia Clarke-Swaby travelled up from Guys and St Thomas' Trust to talk to us about pancreas transplantation and the success of this option for the normalisation of blood glucose levels. Although the selection criteria for this procedure is very tight, the success of this option as a treatment modality is incredible with 69% of those who have a simultaneous kidney and pancreas transplantation surviving beyond 5 years. Immediately prior to lunch (good timing hey!) Cassie Ricchiuti (dietician, Shropshire Community Diabetes Team) talked to us about diet and diabetes and some of the strategies for optimising blood glucose levels. It certainly made us think about how much carbohydrate we put on our plates for lunch!

After lunch we had an excellent session from Noreen Barker (Diabetes Specialist Nurse, Shropshire Community Diabetes Team) about management of hypoglycaemia especially when it happens in the physiotherapy gym, and it was nice to have Niki

Tebbutt from the DSC in Carlisle in the audience for this – many of you might remember Niki's presentation about the development of a trust policy for managing hypoglycaemia in physiotherapy at conference a few years ago. For the rest of the afternoon we focused on footcare with sessions from podiatry and orthotics, and a particularly aptly named session 'Crikey – my foot looks like this – should I be walking on it?' from a colleague of mine in the diabetic foot clinic. Lots of gruesome photographs...

The feedback we had for the day was amazing – with a score of 91% as an overall rating for the day. Did I learn anything? Yes – loads. In a nutshell...make friends with your colleagues in the diabetic foot clinic and in the community diabetes teams – they can support you in so many ways and you will learn so much from them. What else? ...think twice before you put that extra spoon of mashed potato on your plate! **A big thank-you to all our speakers and to our commercial sponsors.**

West Midlands Study Day - Sept 2016 An Introduction to Lower Limb Amputee Rehabilitation

Kim Ryder

West Midlands Regional Rep

On September 8th, the West Midlands region of BACPAR ran another successful Introductory Study Day. The venue was the University of Wolverhampton Conference Centre in Telford. This is the first time we have used this facility and we were well looked-after and the room proved to be good value for money with ample free car-parking on site and a short walk from Telford Central Train Station. Adverts for the day were circulated throughout the BACPAR membership and I also posted out flyers and application forms to all the smaller hospitals and rehabilitation venues in the West Midlands area in order to try and reach the people who work in places who do not see amputee patients very often. I also phoned some of the smaller rehab hospitals in Shropshire. This turned out to be a good idea because it led to 5 people from hospitals local to Telford coming along, and we eventually had a total of 33 delegates from all around the country.

Dr Poorna Ramamurthy from WMRC in Selly Oak kick-started the day with an overview of lower-limb amputation and introduced the delegates to the pathologies leading to lower limb amputation and the various levels of surgery from the partial foot to the hemi-pelvectomy. She also very nicely questioned some of the myths surrounding rehabilitation after amputation, and left us with the startling statistics surrounding the success (or lack of ...) of prosthetic rehabilitation in this patient group.

Lou Tisdale followed this with a very informative session on 'Amputee Pain and its Management' which led to lots of very interesting questions from the audience which showed just how interested they were by this topic. Judy Moule (Wolverhampton) led a fascinating session on the psychological impact of LL amputation and then Marion Gimson (Leicester) talked through the theory about LL amputee exercises before getting the delegates to think about how many different exercises they could come up with to address weakness in the hip extensors to get people thinking about how many different options are open to them other than just the 2 or 3 common exercises. Before we broke for lunch Sue Hayes (Wolverhampton) discussed OT for LL amputees which led to a lot of interesting questions about equipment like the rotastands and I did a brief overview about how the prosthetic centres decide who will manage a prosthesis.

The afternoon was mainly practical sessions and we looked at amputee transfers (Sue Hayes), the PPAM aid (Liz Wood) and getting Amputees on and off the floor (Marion Gimson). We had 4 amputee patients come to this part of the day and they totally stole the show! All were really willing to practise with the equipment we brought in like the commode and the bananaboard and they happily took their prostheses off to be models for Liz's session on how to use the PPAM aid. The day concluded after tea with Freya Box (Wolverhampton) who talked through how a transtibial prosthesis is made and showed a variety of limbs at various stages of manufacture.

The feedback we had on the day was amazing and we just about managed to wrap it up on time too!
Thanks guys...I couldn't have done it without you.

A STUDENT PROJECT INVESTIGATING

PATIENT'S VIEWS ON THE PSYCHOLOGICAL IMPLICATIONS OF AMPUTATIONS

Lee McFarland

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Senior Physiotherapist

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Introduction and Rationale
I completed my final practice placement as a second year MSc pre-registration physiotherapy student with the inspiring and innovative team at Queen Mary's Hospital in amputee rehabilitation. As part of my placement I delivered a 10-minute presentation on the psychological implications of amputations and carried out short interviews with patients. As part of my placement I carried out a presentation on the psychological implications of amputations which relates to this small study.

Many patients adapt well to limb loss however many others are affected significantly by psychological implications (Coffey et al. 2014). Amputations can have a significant impact on wellbeing and quality of life. Psychological implications include anxiety, depression, altered body-image and body discomfort in addition to changes in self-concept and identity (Panyi and Labadi, 2015). Adjusting to these consequences depends on a number of factors. These include how an individual experiences his/her personal situation, perceived benefits of rehabilitation and social support. Several qualitative studies have explored the experiences of limb loss among adults (Senra et al. 2011). These studies have discussed the themes of positive coping strategies, resilience and emotional support (Senra et al. 2011). Rehabilitation is highly dependent on how patients respond to the psychological implications of amputations. There is a link between how patients adjust psychologically and motivational levels in rehabilitation. Being able to accept a new body-image and identity can be helpful in addressing these implications (Panyi and Labadi, 2015).

To the best of our knowledge there is no previous research which has examined how physiotherapists in the NHS can help to manage some of the psychological implications of limb loss.

The objectives of this study were to;

- Explore how amputations affect patients psychologically
- Identify how patients manage the psychological implications of limb loss throughout their rehabilitation
- Identify areas to improve patient care and service delivery

Method
This study was not a formal piece of research and therefore ethics approval

was not obtained. Verbal consent for the study was obtained from my clinical educator. In addition, verbal consent was obtained from all patients to partake in the study and for the information to be used for educational purposes. A short individual semi-structured interview was carried out consisting of 5 questions as detailed below;

1. Did you find it difficult losing a limb?
2. Do you think that losing a limb affected you psychologically?
3. How do you manage to deal with the psychological implications of limb loss?
4. What strategies have you found useful in addressing these psychological implications?
5. How do you think you will manage at home?

Each interview lasted 10 minutes and the above questions were expanded upon as necessary. In total 5 patients were interviewed. There were 4 males and 1 female. The interviews were not recorded. However, the patient's responses were noted in the form of common themes which are supported by quotes and explored in the discussion.

Results

The following themes were identified from the interviews;

- Positive attitude
- Family/support network
- Camaraderie of being in the gym together
- Supportive and enthusiastic team of HCP's
- Goal setting – long term and short term
- Acceptance
- Need to develop a new identity
- Resilient characteristics

Various inspiring and insightful quotes from the interviews are listed below;

- 'The camaraderie has been hugely supportive'
- 'Losing my leg was a highly emotional experience'
- 'You need to be self-determined and confident in your ability to heal'
- 'You have to be realistic about what you can achieve'
- 'If you accept a defeatist attitude you will never win'
- 'Laughter has helped me to get through this and many other hurdles in life'

Discussion

There was a large range of responses and positive coping strategies which patients described. This is supported by Dunne et al. (2014) who have commented on the great diversity in how individuals manage limb loss. One patient commented that 'the camaraderie has been hugely supportive'. Seeking social support from family and friends and goal setting are examples of positive coping strategies which help to empower patients and provide meaning and purpose. Conversely, negative coping strategies include catastrophizing and self-blaming which can rapidly lead to negative outcomes. By having a good understanding of these strategies physiotherapists can deliver tailored services to people at the most appropriate time (Dunne et al. 2014). Interestingly there is no link between age, gender and cause of amputation and the development of psychological implications. In addition, most of the current research has explored the impact of negative coping strategies rather than positive coping strategies (Unwin et al. 2009).

Without appropriate management psychological implications can severely impact an individual's quality of life and the ability to participate in society and one patient remarked that losing a limb 'was a highly emotional experience'. Specific collaborative goal setting can be helpful in addressing these issues and was reinforced by one patient who said 'you have to be realistic about what you can achieve'. Furthermore, it is also important to have a good understanding of adaptive coping strategies which the rehabilitation team can facilitate such as positive thinking, mindfulness, active listening, reassurance and advice. In this way positive outcomes and improved patient care can be achieved (Dunne et al. 2014).

This study was based on a small sample of patients in one geographical area and is therefore not readily generalisable to a wider audience. Given more time and resources a larger study for which ethics approval can be obtained would be appropriate.

Conclusion

This study has helped to identify some of the common psychological implications which can affect people with amputations. These include anxiety, depression, altered body-image and identity. Physiotherapists have a key role within the multidisciplinary team to identify patients with these conditions. Psychological implications can be reduced by employing strategies such as realistic agreed goal setting, active listening, reassurance and advice. Addressing these problems early can help to reduce the negative impact associated with these conditions. Furthermore, self-help strategies such as positive thinking, mindfulness, problem solving and goal setting could be employed by patients when at home and in the community.

What have I learnt?

- Strategies to identify and manage psychological implications of amputations
- Exercise and rehab can be an effective way of managing depression and anxiety
- Advise on positive coping strategies, available resources and referral pathways as appropriate
- Benefits of reflection to help consolidate learning and identify areas of weakness and strength

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Thank you to Mary Jane Cole for the opportunity to present my project and enhance my learning.

CASE STUDIES OF AMPUTEE REHAB FROM AROUND THE WORLD

Rachael Lowe

With BACPAR support Physio-pedia has published 100 case studies on rehabilitation of individuals with lower limb amputation. These case studies are the best of over 1000 case studies that were collected as a result of the 6 week open online course that ran in 2015 and can be accessed by anyone globally free of charge. Physio-pedia can be considered as Wikipedia for the global physiotherapy profession. The mission of this not-for-profit project is "universal access to physiotherapy education". This is achieved through the free and open knowledge resource that is constantly updated by the physiotherapy community (**www.physio-pedia.com**) as well as the free Global Health Programme of courses that is currently being developed (**www.physio-pedia.com/Open_Online_Courses**).

In 2015 in collaboration with the International Committee of the Red Cross (ICRC), Physiopedia ran a free 6 week course on lower limb amputee rehabilitation (**www.physio-pedia.com/Lower_Limb_Amputee_Rehabilitation_Course**). BACPAR members played a key role in contributing content for the course through a specific content development project in Physiopedia (**www.physio-pedia.com/WCPT_Network_for_Amputee_Rehabilitation_Project**). The course was a huge success training over 1000 physiotherapists from over 150 countries (see the full report here **www.physiospot.com/wp-content/uploads/2015/08/Lower-Limb-Amputee-Rehabilitation-Course-Final-Report-2015.pdf**).

There were many great outcomes from the course in both low and high resourced contexts, including a full service review in New Zealand and knowledge development in Gaza, Afghanistan and Iraq where it is extremely difficult for clinicians to access professional development opportunities.

One of the most exciting outcomes of the course was over 1000 submitted case studies. The BACPAR executive saw great value in publishing the best of these case studies and sponsored a project to publish them in Physiopedia. The case studies are openly available for anyone to view and are an excellent database for use in education. The case studies demonstrate how the Physiopedia course along with other International education programs and accessible guidance can contribute to rehabilitation care for amputee patients, having great impact in rural and isolating areas of the world.

See the case studies here **www.physio-pedia.com/Category:Amputee_Case_Studies**

A 35 YEAR OLD DIABETIC ABORIGINAL WOMEN, WHO UNDERWENT A RIGHT TRANSTIBIAL AMPUTATION FOR DIABETIC FOOT ULCER AND COMPLETED PROSTHETIC REHABILITATION: AMPUTEE CASE STUDY IN AUSTRALIA

Abstract
Mary is a 35-year-old Aboriginal woman who underwent R TTA for a large severe diabetic foot ulcer (~5x5 cm area) on the plantar and medial aspect of the 1st metatarsal head, osteomyelitis and dry gangrene. Mary also had necrosis of the Left 3rd toe, which she had amputated at the same time as her R TTA. Mary completed prosthetic rehabilitation to successfully use a prosthesis.

Client Characteristics
Mary is a 35-year-old Aboriginal woman. Mary is unemployed and is currently receiving a disability benefit. She has not worked in paid employment since leaving school at age 15 years. Mary enjoys spending time with her friends, walking and going to concerts and events. Mary does not drive.

Medical diagnosis: Chronic diabetic foot ulcers as described above progressed to dry gangrene and osteomyelitis of the R 1st metatarsal head requiring R TTA. Dry necrosis of the L 3rd toe requiring amputation at the 3rd MTPJ. Post op orders by the surgeon were to mobilise out of bed Day 1 and for weight bearing as tolerated on the L foot with post op shoe fitted by prosthetist/orthotist ensuring no pressure through the L 3rd toe surgical wound.

Past medical history includes: Type 2 diabetes mellitus (diagnosed 10 years ago; poor BSL control requiring Metformin); peripheral neuropathy bilateral lower limbs to knees (no problems with retinopathy or nephropathy at this stage); chronic diabetic ulcers bilateral feet R>L over the past 2 years; asthma (requiring Ventolin prn). Good cognitive function and ability to follow instructions, accepting of requirement for amputation. 10 pack year history of smoking, current smoker 5 cigarettes per day. Previous care: Has been seen by Endocrinology and Vascular Outpatients over the past 2 years. Poor compliance with diet recommendations and BSL monitoring and control.

Examination Findings
Subjective: Chronic bilateral diabetic foot ulcers over the past 2 years as described above. Poor sensation due to peripheral neuropathy, little associated pain so not compliant with crutches or walker to off load ulcers. Mary does a lot of walking as she does not drive (~2 km per day). This has likely contributed to the ulcers not healing. Mary lives at a wheelchair accessible hostel close to the city centre.

Short term goals:
1. To mobilise with a self propelled wheelchair independently and be discharged home (to local wheelchair accessible hostel) within 2 weeks when medical clearance has been given.

2. To commence prosthetic training when R TT wound and L 3rd toe amputation wound have fully healed (within 3 months).

Long term goals:
1. To walk independently with a single point stick with prosthesis within 4 months.

2. To walk unaided with prosthesis with a normal gait without significant deviations within 6 months.

Self Report Outcome Measures:
Through completing this course (Week 2 notes), I am now aware of the Activities Specific Balance Confidence Scale (ABC-UK) and the Prosthesis Evaluation Questionnaire (PEQ) which we did not use at the time.

Physical performance measures:
Bed mobility required minimal assistance day 1 post op and progressed rapidly to independence by day

2. Transfer mobility bed to chair minimal assistance day 1 post op progressing to supervision by day 2 with prompts for safe technique and independence by day 3. Able to sit to stand independently at parallel bars (wearing orthotic shoe to off load pressure through L 3rd toe amputation surgical wound) by day 5. Mobilising independently in self propelled manual wheelchair once IV line/PCA out day 3 post op.

Objective: Full joint ROM upper limbs and lower limbs including hip extension 30 degrees bilaterally and full bilateral knee extension and L ankle dorsiflexion. Full strength 5/5 all muscle groups but slightly decreased hip extensor endurance (only able to do x 10 reps of closed kinetic chain bilateral bridging L and R hip).

ICF findings: (Physiopedia Week 2 notes)
Body Functions and Structures: Muscle endurance of the hip extensors reduced bilaterally. Static and dynamic standing balance and transfer balance affected by the modified footwear required to protect the Left 3rd toe amputation site. No problem with phantom limb pain or post op pain. Reduced sensation L lower limb up to the knee.

Activity Limitations: Standing limited by need to protect L 3rd toe amputation wound until fully healed. Once this wound fully healed and prosthesis fitted Timed Up and Go test was performed initially with walker then with single point walking stick as gait progressed. Time improved by 3 seconds by discharge. 6 Minute Walk test was also performed at this time (no wounds on L foot) and improved by 1 minute between first assessment and discharge 2 months later.

Participation Restrictions: We could have used the PEQ. Mary used her manual wheelchair instead of walking to meet up with her friends. She was not able to attend concerts/events until she was walking independently with her prosthesis with a walking stick and had good stump skin tolerance resistant to breakdown at 5 months post R TTA.

Environmental factors: Mary lived in a wheelchair accessible hostel so she was able to easily access her home and mobilised outdoors with a manual wheelchair on discharge from hospital at day 10 post op.

Clinical Hypothesis
Mary's main problems are:
1. Reduced hip extensor endurance bilaterally.

2. L 3rd toe amputation surgical wound requiring protection and limiting mobility; reduced sensation L lower limb and associated diabetic vascular changes increasing risk of injury to this limb if not protected;

3. R TTA surgical wound needing monitoring and full healing prior to prosthetic fitting. Delayed healing by fall onto stump at 3 weeks post op.

Intervention
1. Pre prosthetic exercise programme focussing on increasing the endurance of the hip extensors for prosthetic gait including closed kinetic chain hip extension bridging exercise starting bilaterally on day 1 post op with 3 sets of 10 reps and progressing to single leg bridging 3 sets of 30 reps by 4 weeks post op. and doing this exercise with legs on the theraball (double leg then single leg). Exercise programme also included prone ly stretches to maintain hip extension ROM; hamstrings stretches; hip abduction strengthening and endurance starting with open kinetic chain in side ly day 1 post op 3 sets of 10 progressing to adding theraband resistance and 3 sets of 30 reps by 2 weeks post op.

2. Protecting L 3rd toe amputation site by ensuring patient wears orthotic post op shoe fitted by prosthetist/orthotists and patient education on correct transfer technique with out hopping or twisting forces.

3. Stump oedema control: Initially fitting double layer tubigrip compression once first post op dressing taken down by surgeon and wound looking good colour with wound edges together, stitches in situ (posterior flap wound) at day 3 post op over top of light Primapore dressing. Progressed to fit Juzo sock compression at day 1 post op just prior to discharge home. Education to keep stump elevated and use stump support with wheelchair (not let stump hang down).

4. Fitting of R TTA prosthesis once stump wound and left 3rd toe amputation wound fully healed at 2 months post surgery. Prosthesis fitted: PTB with pelite liner and cotton socks interface. SACH foot initially for stability fitted progressing to dynamic foot at 5 months once mobilising independently unaided with the prosthesis. Patient able to return to her normal supportive sports shoe footwear once left 3rd toe amputation wound fully healed. Education re: ongoing life long care, daily monitoring and protection for this foot and minimising forces through this foot and seeking medical review at the first sign of redness or breakdown. Teaching appropriate use of prosthesis and regular monitoring of stump skin for signs of breakdown and sock markings to help determine correct fit.

5. Prosthetic exercise programme including: initially teaching weight bearing and weight shifting in the parallel bars progressing to step up lunges with the L foot up onto a step, stepping then walking in the parallel bars with prompts/facilitation for heel contact, weight transfer over the prosthesis, prosthetic hip extension. Mirror and video feedback for gait quality. Side stepping holding rail progression to braiding. Progression to wheeled walker then elbow crutches. Ball rolling under L foot, throw and catch ball in parallel bars progressing to standing on foam, wobble board in parallel bars. Backwards walking and figure 8 walking in and out cones. Clock face stepping progressing by increasing speed and crossing midline initially with walking stick. Functional training with prosthesis including up and down stairs with rail and ramps/ slopes indoors and outdoors, escalator practice with walking stick initially.

Outcome
1. Improved hip extensor endurance from closed kinetic chain hip extension bridging exercise starting bilaterally on day 1 post op with 3 sets of 10 reps and progressing to single leg bridging 3 sets of 30 reps by 4 weeks post op. and doing this exercise with legs on the theraball (double leg then single leg) able to achieve 3 sets of 30 reps single leg on theraball both sides by 6 weeks post op. Hip and knee ROM maintained.

2. L foot protection and self monitoring improved with no further wounds or ulcers in the time patient was seen until discharge from regular outpatient follow up at 6 months post op.

3. R TT stump wound healing progressed well for first 3 weeks with Juzo sock fitted. Delayed then by fall onto stump which opened up about 3 cm along surgical scar line requiring mepilex dressings and fully healed about 4 weeks later with a further week of Juzo sock compression prior to prosthetic casting and fitting at 2 months post op.

4. Prosthetic training with PTB prosthesis commenced at 2 months post R TTA when wounds had fully healed. Progression limited initially by decreased compliance with advice to gradually increase weight bearing time on prosthesis and fragile scar line due to re-opening of wound post fall at 3 weeks post op. 2 cm fragile area on scar line continued to blister for ~6 weeks combined with irregular attendance delaying prosthetic training. Once skin settled progressed well to achieve her long-term goals above. Prosthetic modifications by the prosthetist due to the fragile scar line included trial of silicon sock, which was unsuitable due to excessive sweating causing discomfort and increasing skin breakdown.Success was achieved by the prosthetist grinding out the pelite liner in the fragile scar line area and inserting some light foam to ensure contact so the skin didn't blister and fill with fluid but decreased pressure on the fragile area along with applying hyperfix over light melanin dressing over fully healed area of fragile skin to provide additional protection and limit friction on skin until skin tolerance improved after about 3 weeks.

5. Mary gradually increased her time wearing her prosthesis and was wearing it all day and mobilising independently with a single point walking stick by 5 months post R TTA and mobilising independently with no significant gait deviations by 6 months post R TTA and able to negotiate basic obstacles encountered in

the community such as stairs (advised to continue to hold rail where available), slopes, ramps and escalators with a normal gait pattern.

6. Timed Up and Go test was performed initially with walker then with single point walking stick as gait progressed. Time improved by 3 seconds by discharge.

7. 6 Minute Walk test was also performed at this time (no wounds on L foot) and improved by 1 minute between first assessment and discharge 2 months later.

Discussion

Mary is a young Aboriginal women who underwent R TTA for diabetic ulcers who was ultimately able to achieve her goals and mobilise independently with a prosthesis. [1]

- PVD and diabetes are the major reasons for lower limb amputation surgery. [2]
- Incidence of amputation is higher in smokers, rises with age and is higher in men than women 2:1[1]
- Lower limb amputations account for the majority of all amputations. [2]
- People with diabetes make up about half of all amputees in the UK. [2]
- One Australian loses a lower limb every 3 hours as a direct result of diabetes related foot disease'. [3]
- 30% increase in diabetes related amputations in Australia over the past 10 years [3]).
- Diabetes among Indigenous Australians (Aboriginal people) was 3 times as common as in non-Indigenous Australians in 2004-5. [4]
- The prevalence of diabetes is as high as 30% in some Aboriginal communities [5]. Due to Mary's history of chronic diabetic ulcers and non compliance with mobility aids to off load the ulcers to allow healing, it was vital to educate her about self monitoring and protecting her remaining limb with socks and appropriate footwear and to seek medical review as soon as any red marks or trauma is noticed. It was also important to ensure that she wore the appropriate orthotic shoe to minimise pressure through the site of her left 3rd toe amputation and educate her in the correct transfer technique to minimise forces to this area. Life long precautions and protection of her remaining limb are vital to minimise the risk of further amputation. It was vital to protect this Left foot from day 1 post surgery when transferring out of bed by ensuring appropriate dressings applied and sock and shoe fitted by the prosthetist/orthotists prior to transferring out of bed and to educate the patient on the correct technique to transfer slowly and ensuring minimal rotational forces through the foot. In order to protect the Left sound remaining limb we did not progress mobility by hopping with a fore arm support walker or crutches but focused on aiming to progress to independent pivot transfers between the bed, wheelchair and toilet, independent bed mobility, independent mobility with a wheelchair with R stump support to maintain R knee extension range of motion and prevent dependent R stump oedema and L foot plate to protect the L foot.
- It is important to protect the patient's contralateral limb during mobility training. [6]

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INPATIENT REHABILITATION CHALLENGES IN A HIP DISARTICULATION AMPUTEE: PHYSIOTHERAPY MANAGEMENT: AMPUTEE CASE STUDY IN INDIA

Abstract

A 59 year old man with left hip disarticulation after left lower limb cellulitis/gangrene was admitted for inpatient rehabilitation after multiple operations over a period of 3 weeks. He required 2 additional weeks of bed rest to allow the healing of the allografts and developed deconditioning. Because of weight bearing precautions and other complications, he required the use of gait aids to ambulate, maintaining non weight bearing on the allografts. He progressed to walking 100 metres using axillary crutches at a modified independent level, crossing kerbs and climbing stairs independently.

Client Charactoristics

Patient is a 59 years old local male of Indian ethnicity.

Diagnosis : Left Total Hip Disarticulation secondary to left lower limb cellulitis complicated by gangrene (started with TTA and thereafter TFA followed by total hip disarticulation due to poor wound healing).

Co-morbidities : Peripheral vascular disease, hypertension, history of left lower limb cellulitis, smoker/drinks 2-3 cans of beer daily, undiagnosed type2 DM

Vocation / Occupation : Patient works as a part-time dishwasher/cleaner in a food centre.

Examination Findings

Subjective:

Patient is pre-morbidly independent, community ambulant and works as a part-time cleaner. He is married and stays with his wife in a 1 bedroom public housing on a lift landing level. There is a 1 inch step up to entrance of the apartment and leading to the bath. The bath has a seated toilet but does not have any grab bars installed.

Patient's wife is a home maker and is a diabetic with heart disease. Patient reports good family relations and is a carer to wife who needs help with daily insulin injections and house chores. Patient and wife currently receives social welfare support and enjoys subsidized medical care. He works from 10am to 3pm daily. He travels to work daily via public transport.

Patient's/family's goal:

Patient hopes to be able to continue to be independent and community ambulant with aid. He also hopes to be able to continue to care for his wife. Wife wants patient to be able to be independent as she is unable to care for him.

Self Report Outcome Measures

Pain: Numeric scale 0 to 10 - patient reports pain at residual limb 5/10 at rest. Pain 8/10 when residual limb is moved and when seated. Reports nil phantom limb sensation.

Physical Performance Measures

Chest - clear
Muscle strength: upper limbs - 5/5, right lower limb - 5/5, single leg bridging: 1/3 range limited by pain
Sensation: Hyperesthesia on ant. distal part
Mobility: 1 man assistance - min for bed, mod to max for sitting, max for standing with frame

Clinical Hypothesis

1. Decreased mobility secondary to pain and loss of left limb
- During the initial post op period, patient experienced significant amount of pain in the residual limb which greatly limited therapy and increased patient's need for assistance during mobility
- The loss of the limb also meant that he could not

2. Deconditioning secondary to bed rest due multiple operation and poor wound healing

- Most patient who have undergone hip disarticulation have suffered a decline in their physical fitness[1]. Likewise, the patient required some assistance for functional mobility when he was referred for rehabilitation.
- To perform similar tasks meant that he will need to have higher physical fitness sufficient to meet the energy demands of walking required for practical success. [2]

3. Decreased balance
- No residual limb results in loss of balance and stability as there is no joint sense to allow for the body to position/stabilize itself. Post surgical pain/wound also results in decreased weight bearing/shifting on the amputated side[3]

Intervention

1. Mobility practice

- Bed mobility: rolling, moving up, sitting over edge of bed
- Sitting: static sitting, dynamic sitting
- Transfer practise: to and from chair / wheelchair
- Sit to stand: with use of frame progress to axillary crutches
- Floor transfer to and from floor

2. Physical conditioning

- Aerobic training: stationary bike for UL, Buddha claps, ambulation with equipment
- Strengthening: strengthening program was planned to strengthen the muscles that are important in three-point gait using crutches by a progressive resistive exercise regime after determining 1RM upper limb (shoulder depressors, rotator cuffs, serratus and latissimus)
- Lower limb: hip muscles gluteus
- Stretches: Hamstrings, calf muscles
- Standing tolerance: tilt tabling, progressing to standing with 4 point frame and parallel bars
- Sit to stands
- Ambulation with frame and crutches
- Kerb/obstacle training with use of frame and progressing to crutches
- Stairs training: ascending and descending with use of crutches

3. Balance training

- Static and dynamic sitting tasks (after pain is controlled and the wound is healing well)
- Static standing between parallel bars, progressing to standing without support between parallel bars
- Dynamic standing activities between parallel bars: reaching tasks, throwing ball

Outcome

1. Ability to perform task and assistance and aid required

- The patient initially required 1 man assistance for functional mobility and progressed to being modified independent

2. Ambulation with gait aid and level of assistance required

- The patient initially started training with a 4 point forearm rollator frame and progressed to a 4 point walking frame and then to axillary crutches independently.

3. Ambulation distance

- He initially could ambulate 5 metres and his RPE would be 13-14. He progressed to ambulating 100 metres by discharge with RPE of 11-12

4. Ability to negotiate stair and kerb crossing independently with axillary crutches.

Discussion

The patient factored his age when he made the decision to mobilize using wheelchair with limited ambulation using axillary crutches. D.G. Smith (2005) [4] wrote that age and the rigors of learning are important factors in recovery and rehabilitation especially with higher amputation level.

Psychosocial factors also affected his decision. The patient had a long hospital stay due to multiple operations and wound infection resulting in sepsis. He was not motivated to commit to longer inpatient rehabilitation stay to be fitted for prosthetics. While he was hospitalized, his wife had to be institutionalized and he wanted to be discharged home once he is fit and independent with equipment to continue to care for his wife.

Rehabilitation factored his specific home environment and that patient had to care for his wife. Despite not fitted with prosthesis, the patient was able to progress to being able to progressed to walking 100 metres using axillary crutches at a modified independent level, crossing kerbs and climbing stairs independently. Occupation therapists worked with him on his ADLs and wheelchair mobilisations.

A multidisciplinary approach involving team doctors, medical social worker, rehab doctors, occupational therapist and psychiatrist was key to his eventual successful discharge back to home.[5]

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EVERY STEP COUNTS

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Since 2013 BACPAR have been working with Handicap International to train rehabilitation professionals as part of the UK Emergency Medical Team. Here Pete Skelton, from Handicap International UK, explains what has happened so far and how you can get involved.

What is the UK Emergency Medical Team (UKEMT)?
Funded by the Department for International Development (DFID), the UKEMT is the UK Government's international emergency medical capability, combining a community of health professionals that is managed by the organisation UK-Med, and a surgical field hospital that can be deployed by the government. UK-Med provides humanitarian and medical training for those in the community, and Handicap International (HI) provides the specialist rehabilitation training, as well as advice on rehabilitation and disability to the medical team. Links with HI during deployment ensure that patients treated by the UKEMT continue to receive rehabilitation after the UK team has left.

Who can join?
The Community of Practice is open to all UK registered health professionals – visit www.uk-med.org to register your interest. Once you join, you can access free training like the pre-deployment course run by UK-Med, and the rehabilitation training provided by Handicap International. Rehabilitation professionals with appropriate trauma skills are then selected to join the UK Trauma Register, and train as part of a small multi-disciplinary team to deploy to disasters. Other rehabilitation professionals with trauma-related experience will soon be invited to join either a dedicated rehabilitation or spinal cord injury team, called "specialist cells",to prepare teams with niche skills for deployment.

How does deployment work?
Once you are asked to join a team, you'll need to get agreement from your employer, and can then be placed "on call" for a fixed period of time. If you deploy with the UKEMT, backfill to your employer is covered by DFID. Deployment last for a maximum of 3 weeks, and teams rotate if a need persists.

What's been achieved so far?
Through our work with a range of organisations, including BACPAR, we have developed a package of clinical humanitarian training to UK best practice standards. Over 100 rehabilitation professionals have been trained, and have been deployed as part of the UKEMT to emergencies in the Philippines, Gaza, Nepal and Ecuador.

A clinical training manual[1] on rehabilitation in emergencies has been published, as well as a do's and don'ts in emergencies guide[2] and a WCPT paper on the role of physical therapists in disaster management[3]. Work is also underway with the World Health Organisation to publish minimum standards for rehabilitation in emergency medical teams.

Why is rehabilitation so important at a time of an emergency?
As rehabilitation providers, we face two main challenges in earthquakes and other natural disasters. Firstly, patients are often never referred to rehabilitation, and so patients whose lives would be transformed by simple rehabilitation miss out. Organisations such as Handicap International are doing a huge amount of work to try to change this.

Secondly, because not many organisations provide high-quality early rehabilitation in disasters, many people develop complications like pressure sores or contractures, or become dependent on their families when they could be independent. The great tragedy is that often these people have already lost their homes and their livelihoods. By providing early rehabilitation as part of the UKEMT, we ensure they receive the basic input they need to keep them safe and get them going, and our links with Handicap International in the field ensure support is available for those with longer term needs.

What are the longer term challenges facing survivors with life-changing injuries?
One of the great challenges of working in a disaster is that the world's attention quickly moves on, but people with injuries like amputations and spinal cord injuries are left with lifelong difficulties. For them, rehabilitation is only part of what they need - if their society does not include them or treat them with equality, they will face challenges being able to work, get an education or access healthcare.

An important part of Handicap International's longer term response is making sure that people with disabilities are better included in their societies, in particular in the aftermath of disasters. Strangely, often disasters provide an opportunity to "build back better".

How can I get involved?
You can join the community of practice by visiting:
www.uk-med.org/trauma
or contact:
peter.skelton@hi-uk.org for more information.

The critical thing is to get involved before a disaster strikes, whether through accessing the right training if you are interested in deploying, or by supporting organisations that have a long-term presence in countries at risk of, or recovering from disasters. There's never been a better time to support the work of Handicap International, thanks to our Every Step Counts Appeal.

The Every Step Counts appeal is raising essential funds to help disabled and injured people by supporting sustainable rehabilitation care in countries such as Nepal, DR Congo and Jordan. And until 18th July, every pound raised will be doubled by the UK government, enabling twice as many people access the essential rehabilitation care they desperately need.

To donate, visit: **www.everystepcounts.org.uk**
or call: **0870 774 3737**.

Or why not get your colleagues involved and organise a fundraising event at work?

To order your fundraising pack, visit:
www.everystepcounts.org.uk/pack

Reference Links

1 https://www.bond.org.uk/resources/rehabilitation-in-sudden-onset-disasters

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PIONEERING INNOVATION IN PRACTICE PROFESSIONAL DEVELOPMENT IN AMPUTATION AND PROSTHETIC USE

University of Southampton
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Maggie Donovan-Hall and Cheryl Metcalf from the Faculty of Health Sciences at the University of Southampton and members of the BACPAR Executive Committee education working group have worked together to design a range of flexible learning opportunities for healthcare professionals currently working in amputee rehabilitation or who would like to move into this area. This will enable students to gain an in depth understanding of the patient journey from preamputation to prosthetic rehabilitation within a holistic framework, exploring both the physical and psychological aspects of patient care.

This has involved the development of two exciting new modules that provide the opportunity to offer flexible CPD opportunities ranging from an MSc pathway in Amputee Rehabilitation.

These new modules and MSc pathway have now been approved and validated and the first module 'Amputation Rehabilitation and Prosthetic Use' will start in October 2016. To find out about any of these learning opportunities, please contact the programme leads:

Dr Maggie Donovan-Hall - Email:
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or
Dr Cheryl Metcalf - Email:
c.d.metcalf@soton.ac.uk

Or go to: **http://www.southampton.ac.uk/healthsciences/cpd/courses/hlth6160-amputeerehabilitation-and-prosthetic-use.page**

Working Together:
Multidisciplinary Team work in Global Health
ADAPT Conference & AGM 2016
Friday 18th & Saturday 19th November
Resource for London, 365 Holloway Road, London, N7 6PA &
The National Hospital for Neurology and Neurosurgery,
Queen Square, London, WC 1N 3BG

Topics & Sessions include:

The MDT in Global Health
Practical : Wheelchair provision in Global Health delivered by Motivation
The ADAPT Grant:
Awarding this years grant & hearing from last years winner
Intimate and stimulating discussions
Presentations: Members of ADAPT and other disciplines working in Global Health
The Annual ADAPT Debate:
Generalists V Specialists in Global Health
….and more

CHARTERED SOCIETY OF PHYSIOTHERAPY

ADAPT
Chartered Physiotherapists in International Health and Development

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