BACPAR

BRITISH ASSOCIATION OF CHARTERED PHYSIOTHERAPISTS IN AMPUTEE REHABILITATION






The Journal
Issue 36, Spring 2012

Contents

Welcome

Thanks to Sue Flute (Journal Editor) and fellow contributors to this Journal for another excellent edition.

At the time of my writing of this message, the Committee are planning for the next Executive meeting on the 6th March. By the time this journal is circulated, planning of BACPAR's activities for 2012 will be well underway.

The BACPAR executive proposed that we collaborate with ISPO UK for BACPAR's 2012 conference. This was supported by the membership at the 2011 AGM and so planning is underway to bring this together. BACPAR's representation to the organising committee (Julia Earle and Mary Jane Cole) have stressed to ISPO UK, who is taking financial responsibility for the conference, the importance of an affordable delegate fee. The conference is planned for September 27th and 28th and will include the AGM - dates for your diary.

The 2011 Conference, in a new venue in Leicester, was largely well received by delegates in terms of the presentations, its value for money and the location, and the evaluation forms again generated some excellent ideas for future topics (for fuller feedback see the conference feedback article).

Another means of attaining CPD was launched in November when BACPAR members were given online access to selected SAGE publishing articles through the BACPAR website http://bacpar.csp.org.uk/ if you haven't done so already take a look and let us know what you think of the article through the discussion on the same page of the website.

At the 2011 AGM changes to the constitution were discussed and agreed. These changes were in response to the requirements of the Professional Network constitution outline prescribed by the CSP. The AGM minutes are available within this journal. Ruth Woodruff stood down at the end of her term as BACPAR Honorary Secretary, and Lucy Holt (Oxford regional rep) was duly elected into the post. Thanks to Ruth for all her excellent work in the role and we hope to see her in another executive post in the near future.

The new membership year commences on the 1st March, so please encourage your peers to join. Remember that those now eligible for full membership include CSP member support workers (at a reduced rate).All full members are eligible to nominate themselves for a role on the BACPAR exec committee and apply for a bursary following 2 years of BACPAR membership. Membership fees continue to be held at 2010 levels, in recognition of the ongoing economic difficulties, subsidised by profit achieved by the conference, which in turn is due to excellent support from our sponsors and high delegate numbers.

Work has continued on the full update the Evidence Based Clinical Guidelines for the Physiotherapy Management of Adults with Lower Limb Prostheses and we eagerly await the guideline produced by the 3rd PG Cert Cohort re oedema management.

As a stakeholder in amputee rehabilitation BACPAR has been invited to a number of meetings to implement the findings of the Murrison report (published in June 2011) and to consider what the next version of the commissioning document that supports "the assessment and provision of equipment for people with complex disabilities" should contain.

We will update you of any further plans for 2012 as soon as they have been finalised. If you feel strongly about BACPAR's involvement in anything in particular please do not hesitate to speak to your regional representative or contact me on Louise.Tisdale@wolvespct.nhs.uk

Best Wishes for 2012

Louise Tisdale - BACPAR Chair 2012

BACPAR, ISPO and BAPO Collaborative Conference - Sheffield 27th and 28th September 2012

Hopefully you are aware –especially if you read my email, that instead of our usual BACPAR conference in 2012 we are joining together with ISPO UK (International Society of Prosthetics and Orthotics) and BAPO (British Association of Prosthetics and Orthotics) for a 2 day mega event!

Planning for this is in the early stages. Mary Jane Cole and myself are representing BACPAR at the organisational committee. It promises to be a very exciting and valuable occasion for CPD, networking and collaborating, and a great opportunity to experience a wider range of topics than we usually have at BACPAR conferences due to the multidisciplinary nature of the event. The plan at present is to have several main speakers which will appeal to the wider audience but also to have concurrent breakout sessions which will be more profession specific. It is anticipated that there will be renowned speakers presenting, including the President of the International Society of Prosthetics and Orthotics, Jan Geertzen.

At the conference in November we asked for ideas/topics for future events and also your learning needs on the membership forms. From this several themes have emerged which we have put forward to the committee and now WE NEED YOUR HELP.

The main themes which have come up are:

- Pain management
- Complex patients
- Gait training and prosthetics (especially practical)
- Exercise training (eg core stability, pre prosthetic, preventative, safety and appropriate responses to exercise)

What we now need are suggestions for speakers/topics for a variety of sessions. As well as main speakers within the breakout sessions there will be opportunity for free papers. These are either 15 minute (including questions) or shorter 5 minute presentations (plus couple for questions) which can be case studies, examples of good practice, innovations (eg practice, service), reflections, audit findings (eg falls, contralateral foot) or research questions.....These are usually grouped thematically. There will also be poster presentations, but more about that later.

ISPO will be asking for abstracts from those wishing to speak at any of the sessions as this helps to group them appropriately and to review the content for quality. Please do not be put off by this; they give very specific guidance about how this is done. Mary Jane and I, as well as many other BACPAR members that have done this before, I am sure will be very happy to support you and answer any questions you may have.

Please let me know if you have any suggestions of speakers, titles for presentations/free papers, want to volunteer to speak.... so that we can start getting a "physio" programme together. We need your support now, so please get thinking about this and let us know by the end of March.

Oh, and of course put those dates in your diary in big red pen!

Julia Earle - bacparmembership@gmail.com

Guidelines Update

The CSP are in the final stages of collating the external reviewers' comments on the updated 2003 Prosthetic Guidelines. Once we have received these comments then Karen and I will then have to respond to them - i.e. make any necessary changes, explain any unclear processes etc. These changes and clarification will then go back to the CSP for final endorsement. The final document can then be sent to the publishers for formatting. We are optimistic that the whole process will be finished by September.

In addition there will be a couple our membership who are going to review the RSL Steepers' Prosthetic Best Practice Guidelines. This is only in the initial stages though.

Tim Randell - Guidelines Co-ordinator

BACPAR Membership 2012

BACPAR membership for 2012 is due from the beginning of March.

There have been a few changes in the categories, so please check the following details to ensure you apply for the correct membership. There has not been any changes in the fee's – good news! Unfortunately we are still not able to offer on line payment until the CSP have worked out a few of the problems with the system but we should be able to by next year – I know I said that last time.

The new membership form should be available on iCSP and the BACPAR website and will also be emailed out to each member. I look forward to the rush of emails and cheques.

Categories for 2012 membership

Full Membership is open to any current member of the CSP whether they are a qualified physiotherapist or a CSP associate member. This enables the holder to vote at the BACPAR AGM and hold a seat on the executive committee. (Some executive positions are only open to Physiotherapists in this category- see the BACPAR constitution). Physiotherapists working within the UK must also be members of the HPC. CSP members working outside of the UK must be registered with the appropriate governing body of the country in which they are working (should one be in place).

Full Membership Fee = £35.00
Reduced fee for CSP associate members = £15.00

Departmental Membership is available to any physiotherapy department and may have full BACPAR membership status. This allows 2 delegates who are CSP members to attend study days at the membership rates, but it allows only 1 vote at the BACPAR AGM.

Departmental Membership Fee = £55.00

Allied Associate Membership is available (at the discretion of the National Executive Committee) to:

- Those from professions who are not eligible to join the CSP. All such members will have membership of a health or professional body or association as appropriate to their role.
- Any physiotherapist, working outside of the UK, who is not a member of the CSP providing they are a member of the governing body of the country in which they are working (should one be in place).
- Any student of physiotherapy.

Allied Associate Members are not entitled to vote at the BACPAR AGM but can hold certain seats on the executive committee at the discretion of the Executive (see the BACPAR constitution).

Allied Associate Membership Fee = £35.00

Reduced fee for Student Allied Associate Members = £10.00

All members will receive two journals a year and be able to attend national and regional BACPAR events at reduced membership rates.

If you have any questions regarding this please contact Julia Earle on 01634 833926 or bacparmembership@gmail.com

Julia Earle - Membership Secretary

Changing Times in Amputee Rehabilitation

I started working in a permanent physiotherapy post at the ALAC (artificial limb and appliance centre) in Bristol in 1984 having previously worked there in a rotational post and as a physiotherapy student.

In those days it was in the middle of a housing estate and run by civil servants working under the auspices of the Department of Health and Social Security. The prosthetic companies were Hangar, Vessa and Steeper. Everything had to be written in triplicate and checked by several clerical officers. The most important thing was " The File" and the least important thing was the patient. One day I was told by the clerical manager that the patient in my room, who was distressed, did not exist because he didn't have a file.

There was no such thing as a multi-disciplinary team. The doctor was the only person to assess a new patient and virtually everyone was given a limb whether or not they were able to use it. As a physiotherapist, I then spent months trying to teach the patients to walk. Often, legs came to the centre and went home again in a brown paper sack and were not worn between sessions. I worked single handed with virtually no support and my room was as far away from the fitting rooms as possible.

The prosthetists were called fitters and most had been bench fitters first and had progressed up the ladder. They did not have university degrees. There were several technicians in the workshops. The artificial legs were sent to Roehampton or Alton to be manufactured, and between fitting and delivery, which took several weeks. The main materials used were metal and leather and all legs were of conventional build. There was no such thing as a modular limb.

One admin assistant only was allowed to issue stump socks and these were mainly wool with the occasional cotton or nylon. The patient had a yearly allocation and was not allowed any extra. If they forgot their socks I had to beg for a replacement which would take them over their allocation. If a patient wanted to change an appointment I had to beg the appointment's clerk who thought no excuse other than death was good enough to make her change the booking.

The doctor was treated like God and not allowed to carry files or take a leg out of a paper bag. He prescribed every limb component and also had to sign off every limb that was delivered so patients frequently waited over an hour just for this. The manager of the centre did no work at all as far as I could see. He spent his day in the corridor saying "good morning" to passers by or sat in his empty office with an empty desk. I could write another article about all the idiosyncrasies of the string of managers that we had.

When we were eventually integrated into the health service and the department was moved to the Southmead Hospital site, we had an NHS manager and an excellent multidisciplinary team, who all worked for the patients and each other. It was a very good place to work and an excellent service.

Unfortunately, this team is now being taken apart due to financial constraints. The doctor and nurse are being replaced by a nurse practitioner i.e one person to do two jobs. We no longer have a doctor here. For the first time since I have worked here we have a waiting list for primary patients to see a prosthetist as the number of prosthetists and technicians has been decreased. Instead of one band 7 physiotherapist at 31 hours and a band 6 at 15 hours, the service has been downgraded to 22.5 hours of a band 7 and 20 hours of band 3. Who knows who will lose their job next year as yet more money has to be saved.

After 27 years as a physiotherapist at Bristol DSC and 35 years in the NHS, I am taking my pension. I still feel that I have a lot to give but I am not wanted in the modern NHS and I have become too expensive a commodity. I shall miss the patients and my colleagues but not the organisation. I do not feel optimistic about the future of the prosthetic service and the care of amputees.

I hope that I am proved wrong.

Linda Croft -Senior Physiotherapist

BACPAR Conference 2011

The venue for this year's BACPAR conference was new, the very modern Curve Theatre in Leicester. The challenge remained the same; to provide an interesting and varied programme that met the needs and expectations of the delegates, who include surgical, vascular, amputee and prosthetic specialists, working in acute and non-acute settings, with varying levels of experience. This year for the first time the programme also contained a strand for our occupational therapy colleagues – increasing the difficulty of catering for everyone.

Talking of catering – it isn't good to provide physios with only carbs and no greenery at all. Sadly they forgot to serve the fruit that was ordered for the first day which would have improved things a lot! A word in the ear of the caterers produced a really nice lunch on the second day, with vegetable batons, dips and fruit for afters!

The conference proved to be a game of 2 halves with the first day covering a variety of topics in the form of free papers and longer presentations. The second day was principally about the early/acute management of the vascular patient with excellent presentations on vascular ultrasound and Keeping Vascular patients walking.

The development of evidence based guidelines for occupational therapy for people who have had lower limb amputations and the trials and tribulations that involves was explained by Fiona Carnegie and Jane McLaughlin and sounded very familiar to the BACPAR members involved in guideline development over the years.

A presentation on neurolinguistic programming (NLP) was very interesting and informative and is obviously an area worth investigating for therapists who want to motivate their patients to achieve their highest potential. At the last minute Louise Robson stepped in and delivered the goods when her co-speaker Anna Duschinsky was unable to attend.

It was good to see a physiotherapy graduate confidently and clearly discussing a review of studies on core stability training for low back pain extrapolated to lower limb amputees. Anthony Bath provides evidence that the future of the profession looks good if he is anything to go by.

A group discussion on provision (or not) of prostheses and which types of knee units are most readily used for specific mobility grades produced some interesting comments on financial constraints and the decision making process of the multidisciplinary team.

The Louise White award for best speaker went justifiably to Simon Hanna & Helen Robins for an attention grabbing presentation on Community Exercise Programmes and Referral (Guidelines and Evidences). Mary-Jane Cole's poster The Development of a Self-Rating Tool towards the Evaluation of Competency in Amputee Rehabilitation won the Louise White prize for best poster presentation.

Each delegate's pack included a piece of theraband and Simon got the whole audience moving by taking it through a variety of chair based exercises, taken from a very successful scheme set up by the Cambridge City Sports Development Team called Forever Active. www.forever-active.org.uk

Recreation & sport for prosthetic users was represented by presentations on the Jubilee Sailing Trust and Paralympic basketball by Joe Bestwick one of our Paralympic hopefuls for 2012.

Unfortunately, to everyone's disappointment our after dinner speaker was stranded somewhere in the north and was not able to give the after dinner speech. Maybe next year.....

Next year the conference will again try something new; a combined conference with ISPO to be held in Sheffield on 27th & 28th September. There are more details elsewhere in the journal but for now make a note in your diary and think about presenting a free paper!

ISPO Report

ISPO was held in Hammersmith Hospital in London on 7th October 2011. Having had such a great experience last time (possibly something to do with being let out without my two small children for the day and Bob Gailey being the speaker!) I decided that getting on a train would be more do able than flying like last year!

The conference was opened by Laura Burgess, and she handed over to the companies who all got their five minutes of talk time, giving us an update on their products.

The next speaker was Sue McLellen, Chief Operating Officer from the London Specialised commissioning, giving us her expert view on what is happening at commissioner level and what we could be looking out for in our own areas.

Professor Zahidedi was next up with prosthetic feet, he gave a different view on the way we think and challenged us to look at things differently and to think about the way prosthetics is developing and is this the way forward?

There was then a coffee break, we got to look after the BACPAR stand and visit all the other exhibitors who were there which is always a good opportunity to see what is going on in the prosthetic world and ask lots of questions.

Next up was the free papers session, which was opening by Alan McDougall, who was a bit miffed as several people had borrowed his video for earlier presentations! But he gave an excellent presentation comparing the Echelon and Esprit feet, which was easy to understand and talked about quality of life in a way that we a Physiotherapists might interpret it.

Then we had Dr Nicola Cairns talking about a research project from Strathclyde which was a questionnaire looking for satisfaction and importance of nine features; colour, shape, touch, fit under clothes, cosmesis bending, impact on joints, waterproofing, cleaning, and durability. Unsurpsingly the resounding result was lower limb amputees are not happy with their current cosmesis and a redesign would be welcome!

We were then given the last lecture before lunch which was an audit on the sound foot in diabetic amputees…then Lunch!

After lunch we had the Blatchford lecture from Jason Highsmith on the "Safety, bioenergetics and Healthcare cost Efficacy of the C leg micro processor knee, a review of the literature" Now I am sure that this was a very good review but I got a tad lost in the explanation of what was being said, there was a lot of describing what happened and what was reviewed. (Come back Bob, I understood everything you said!)

Then came the best bit of my day! (bearing in mind they ran so late that I couldn't stay to see Helen Scotts' presentation, which was a bit gutting as that was one of the reasons I elected to go to ISPO) Lower limb arterial intervention, the options and Outcomes: what the vascular surgeon can do! Was an excellent talk by Mr Keith Jones. He was an exceptional speaker who knew what he was talking about and certainly put some good points across including the fact that he makes sure that the juniors are capable of operating and amputation before he leaves them as they could stand to make someone's life a complete disaster with a residual that is not suitable for a prosthesis.

Coffee was next and then I got to listen to some of the next speaker but had to go before Helen Scott's presentation which was not a good thing. Sorry Helen.

So was ISPO a good day, yes it was there was a good variety of speakers, and I learnt some new things, the children got a new swimming bag each! They were happy, but the thing that I will take away from this on conference organization is running to time, is very important. I should have booked a later train but I didn't expect it to overshoot so badly!

Falls Efficacy, Health Status and Functional Performance in Transtibial Amputee Fallers vs. Non-fallers

Running head: Health status and function in transtibial amputees
Keywords: amputee; falls; falls efficacy; function; health status; transtibial
Authors: Natalie Vanicek PhD1, Siobhan Strike PhD2, and Remco Polman PhD3
Affiliations:
1. Department of Sport, Health and Exercise Science, University of Hull, HU6 7RX, UK
2. School of Human and Life Sciences, Roehampton University, London, SW15 4JD, UK
3. Institute of Sport, Exercise and Active Living, Victoria University, Melbourne, Australia

Corresponding author:
Dr Natalie Vanicek
Department of Sport, Health and Exercise Science
University of Hull
Hull
HU6 7RX
United Kingdom
Tel: +44 (0) 1482 463141
Fax: +44 (0) 1482 463855
E-mail: N.Vanicek@hull.ac.uk

Abstract

Falls may lead to loss of independence and mobility, and contribute to low falls efficacy. The primary aim of this study was to determine if amputee fallers and non-fallers differed on functional performance, falls efficacy and health status. Eleven transtibial amputees (categorised into fallers (n=6) and non-fallers (n=5)) completed the Timed Up and Go (TUG), 10m walk test, Modified Falls Efficacy Scale (MFES), and Short-Form 36 (SF-36). No significant differences were reported for TUG (P=.54) and 10m walk (P=.80) times between the fallers and non-fallers. The non-fallers scored significantly better on the emotional role health attribute of the SF-36. There were no significant differences between falls efficacy scores on the MFES between the two groups. The TUG test did not appear to be sensitive enough to distinguish between independent amputee fallers and non-fallers in the current study. It is believed that measures such as the TUG and 10m walk tests and MFES may show ceiling effects when used with community-dwelling fallers and more sensitive measures should be used in falls prevention programmes and rehabilitation settings. Perceived health status was associated with performance on daily tasks and therefore was considered a good indicator of overall function.

Introduction

Due to their altered lower-limb mechanics, transtibial amputees are at greater risk of falling compared to age-matched, able-bodied individuals.1 The relationship between falls and function has been well-documented 2-6 and specifically among transtibial amputees.7-9 Falls often lead to activity avoidance, loss of independence and mobility, as well as the development of decreased falls efficacy. Poor falls efficacy has been recognised as an important predictor of falls severity in older adults.10 However, falls efficacy is modifiable and has been recognised as an important factor in falls prevention and treatment programmes.11.

The terms 'falls efficacy', 'balance confidence' and 'fear of falling' have often been used interchangeably in the literature. The term 'falls efficacy' refers to a person's perceived ability that they can accomplish a task without falling. A number of studies have found low falls efficacy and increased fear of falling in lower-limb amputees.1, 12-13 Having fallen is likely to influence a person's falls efficacy, yet there is little empirical research on the relationship between falls efficacy and functional motor performance or health status in amputee fallers and non-fallers.

The first aim of the present study was to determine if transtibial amputee fallers and non-fallers differed in their time to complete functional performance tasks, and on their falls efficacy and health status. Secondly, we examined whether there was a relationship between the functional tests and falls efficacy and health status with our population. Finally, the relationship between falls efficacy and health status in relation to a person's falls history was investigated. We predicted that previous fallers would perform the functional performance tasks more slowly, have lower falls efficacy and general health status scores compared to non-fallers., We also predicted that lower performance scores would be associated with lower falls efficacy and health status scores.

Methods

Participants

Eleven transtibial amputees were recruited from the local Artificial Limb Unit as part of a wider study.7-9 Participants were included in this study if they wore their prosthesis on a daily basis and could walk without a walking aid and without experiencing any pain. Participants were classified into either the non-faller or faller groups based on their falls history in the 9-month period leading up to testing (Table 1). A fall was described as "an event which resulted in the person coming to rest inadvertently on the ground or other level, other than as a consequence of lost consciousness, a violent blow, stroke or epileptic seizure".14 The study was approved by the Local Research Ethics Committee (REC number: 05/Q1105/68). All participants gave written informed consent to take part in this study.

Amputee participants	Gender	Age (yrs)	Height (cm)	Body mass (kg)	Amputated Limb	Type of prosthetic foot	Reason for amputation	Time since amputation (yrs)
Non-faller								
1	F	50	163	97	Right	Dynamic foot	Clubfoot	1.0
2	M	82	169	88	Left	Multiflex foot	Vascular	3.3
3	F	70	147	49	Left	Multiflex foot	Traumatic	22.0
4	M	26	185	63	Right	Variflex foot	Clubfoot	0.8
5	M	55	185	73	Left	Multiflex foot	Traumatic	26.0
Mean (SD)		**57 (21)**	**170 (16)**	**74 (19)**				**10.6 (12.3)**
Faller								
6	M	46	181	83	Left	Variflex foot	Traumatic	12.0
7	M	43	173	76	Right	Ceterus foot	Traumatic	1.2
8	M	67	168	62	Right	Multiflex foot	Traumatic	1.7
9	M	43	196	93	Left	Multiflex foot	Traumatic	4.0
10	M	65	185	92	Right	Multiflex foot	Vascular	0.8
11	M	71	165	63	Right	Multiflex foot	Vascular	1.3
Mean (SD)		**56 (13)**	**178 (12)**	**78 (13)**				**3.5 (4.3)**
***p* value**		**0.94**	**0.35**	**0.68**				**0.22**

Table 1: Characteristics of amputee participants

Functional performance tasks

Timed Up and Go (TUG) test: The TUG test describes a realistic mobility assessment including potential fall situations, such as transfer in an out of a chair, walking and turning.15 Adequate reliability and validity have been reported for the TUG test.16 This functional performance test was chosen for this study because it is commonly used by physiotherapists working with amputees. Participants were asked to complete the TUG test three times. The average value was used for statistical analysis. A standard armchair was used, with a seat height of 46 cm and arm height of 65 cm.15
Timed 10-metre walk test: Timed walk tests have been shown to be valid, reliable and simple and easy to administer in a variety of settings and can provide clinical information about normal and pathological gait abilities.17-18 The 10-metre walk test records the time taken to cover 10 metres, which is considered the minimum functionally significant distance to achieve independent ambulation.17 In the current study, participants were asked to walk along a gait walkway in the laboratory at their self-selected pace. The starting and finishing positions over 10 metres were marked on the floor and the investigator used a stopwatch to time how long it took the participant to cover that distance.

Health status and falls efficacy instruments

Short Form 36: The SF-36 Health Survey is a general health status measure composed of 36 questions and eight different health attributes with 2 to 10 items each: 1) physical functioning, 2) role limitations due to physical health problems, 3) bodily pain, 4) general health, 5) vitality, 6) social functioning, 7) role limitations due to emotional problems and 8) mental health (psychological well-being).19 The SF-36 is easy to use, can be self-administered and relatively quick to complete. Good reliability and discriminatory validity has been provided for the SF-36 for elderly population.20
Falls efficacy: The modified falls efficacy scale (MFES)21 was used in the present study. The MFES is comprised of 14 items and 2 factors (indoor type activities; outdoor type activities) and has proven useful in detecting early stages of fear of falling in relatively active, community-dwelling elderly individuals. Good internal reliability has been provided for the MFES.21

Statistical analysis

Independent sample t-tests were used to determine if falls history had a significant effect on functional performance, falls efficacy and health status between fallers and non-fallers. Levene's test for equality of variances was used to assess homogeneity. In the instance of violation of homogeneity of variance, the corrected t-value was used. To assess the relationship between functional tasks and psychological data, Pearson's Product Moment Correlation Coefficients were calculated. The alpha level for significance was set a priori at 0.05.

Results

Functional performance tasks

All participants were able to complete the TUG and 10-metre walk tests successfully without falling. The results are presented in Table 2. No significant differences were found for TUG (t9=-.63, P=.54) or 10-metre walk time (t9=.26, P=.80) between the non-fallers and fallers.

	Amputee participants	
	Non-faller (n=5)	**Faller (n=6)**
TUG time (s)	11.5 (1.5)	13.1 (5.3)
10m walk time (s)	9.9 (2.0)	9.5 (3.0)

Table 2: Mean (SD) TUG (Timed Up and Go) and 10m walk times (s) presented for the non-fallers and fallers

As expected, strong correlations were found for performance variables in both the non-fallers and fallers. A non-significant but strong positive correlation was found for the TUG test and the 10-metre walk test (r=.70; P=0.19) in the non-faller group. For the fallers, a strong positive correlation was found between the TUG test and the 10-metre walk test however this just failed to reach significance (r=.79; P=0.06).

Health status and falls efficacy data

Results from the SF-36 and MFES questionnaires are presented in Figures 1 and 2, respectively. Overall, the amputee non-fallers and fallers scored similarly on the SF-36 items. A significant difference was found between the groups for one SF-36 factor: the non-fallers rated emotional role (t5=3.16, P=.03) significantly higher than the fallers. Although not significant, the non-fallers showed a trend towards better ratings for general health (t5.75=2.10, P=.09) and vitality (t5.22=2.04, P=.09).

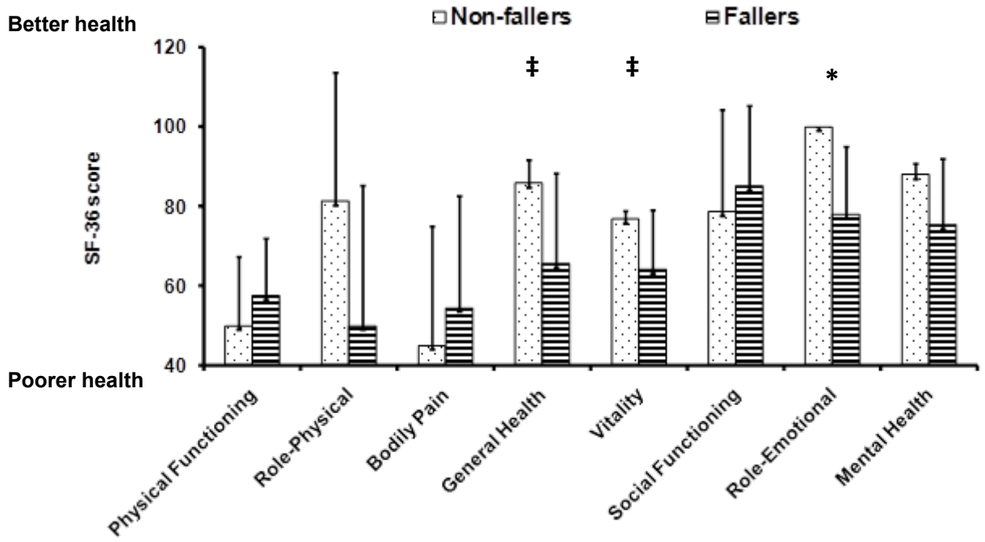


Figure 1. Mean (SD) SF-36 scores for all eight items for the non-fallers and fallers.

** Indicates significant difference between non-fallers and fallers with an independent samples t-test (P<.05).*
‡ Indicates a trend between non-fallers and fallers with an independent samples t-test (0.10>P<0.05)

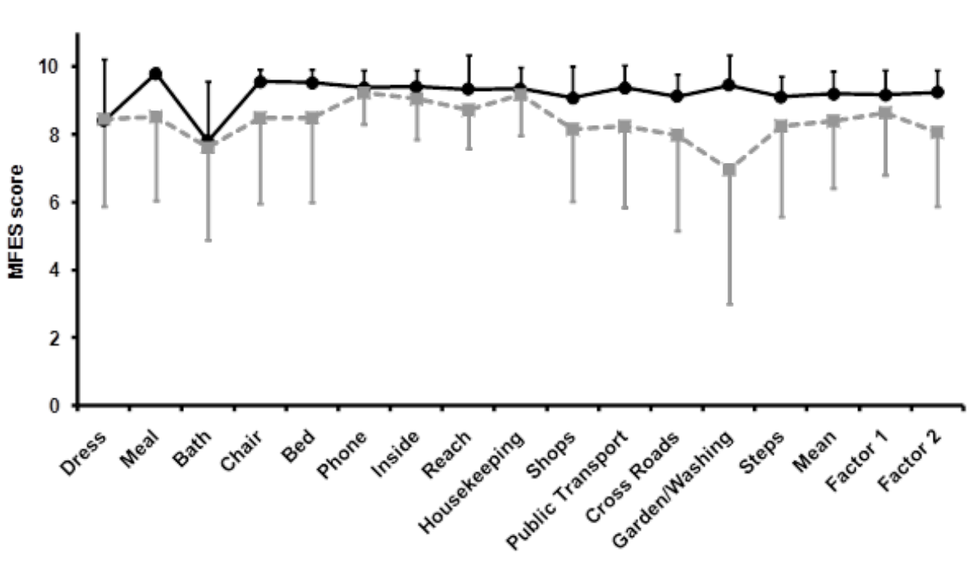


Figure 2. Mean (SD) self-rated falls efficacy at performing specific tasks without falling, overall score and grouped according to indoor- (Factor 1) vs. outdoor-type (Factor 2) activities. The data are presented for the non-fallers (solid black line) and fallers (dashed grey line). MFES: Modified Falls Efficacy Scale

Examining the different MFES activities individually revealed that there were no significant differences between the non-fallers and fallers on self-reported falls efficacy (Figure 1). No significant differences existed on indoor, Factor 1 (P=.57) or outdoor, Factor 2 activities (P=.28).

Relationships between functional tasks and health status and falls efficacy components

The correlation matrices for the non-fallers and fallers can be found in Table 3. In the non-fallers and fallers and for all participants grouped together, no significant relationships were found between the functional performance tests and health status or falls efficacy sub-components. However, the fallers showed a strong negative correlation for 10-metre walk test and falls efficacy on outdoor-type (Factor 2) activities that just failed to reach significance (r=-.77, P=.07). A trend was also found for TUG test performance and self-rated general health on the SF-36 (r=-.59, P=.06) for all participants.

	Non-fallers (n=5)		Fallers (n=6)		All participants (n=11)	
Correlations	r value	*p* value	r value	*p* value	r value	*p* value
TUG / SF36 physical function	0.57	0.31	-0.54	0.27	-0.19	0.58
TUG / SF36 physical role	0.57	0.31	-0.52	0.30	-0.35	0.29
TUG / SF36 body pain	0.55	0.33	0.38	0.46	-0.39	0.24
TUG / SF general health	0.52	0.37	-0.64	0.17	-0.59	0.06
TUG / SF vitality	-0.49	0.40	-0.32	0.54	-0.38	0.25
TUG / SF social fucntion	0.48	0.41	-0.58	0.23	-0.24	0.47
TUG / emotional role	could not be computed †		-0.14	0.79	-0.24	0.48
TUG / mental health	-0.56	0.32	0.01	0.99	-0.11	0.75
10 m WT / SF36 physical function	0.25	0.68	-0.55	0.25	-0.24	0.47
10 m WT / SF36 physical role	0.25	0.68	-0.34	0.51	-0.09	0.80
10 m WT / SF36 body pain	0.04	0.95	0.39	0.44	0.24	0.49
10 m WT / SF general health	0.14	0.82	-0.64	0.17	-0.39	0.23
10 m WT / SF vitality	0.08	0.91	-0.64	0.17	-0.41	0.21
10 m WT / SF social function	-0.05	0.94	-0.13	0.81	-0.10	0.76
10 m WT / emotional role	could not be computed †		-0.20	0.70	-0.07	0.85
10 m WT / mental health	-0.06	0.92	-0.32	0.54	-0.20	0.56
TUG / MFES Factor 1	0.12	0.85	-0.10	0.85	-0.12	0.73
TUG / MFES Factor 2	0.14	0.82	-0.41	0.43	-0.41	0.21
10 m WT / MFES Factor 1	0.49	0.40	-0.59	0.22	-0.34	0.30
10 m WT / MFES Factor 2	0.49	0.40	-0.77	0.07	-0.49	0.13
MFES Factor 1 / SF physical function	-0.36	0.55	0.56	0.25	0.19	0.59
MFES Factor 1 / SF physical role	-0.36	0.55	0.14	0.79	0.10	0.77
MFES Factor 1 / SF body pain	-0.17	0.78	0.33	0.52	0.14	0.69
MFES Factor 1 / SF general health	0.31	0.61	0.52	0.29	0.51	0.10
MFES Factor 1 / SF vitality	0.54	0.35	0.86	0.03	0.78	0.01
MFES Factor 1 / social function	-0.52	0.37	-0.09	0.86	-0.23	0.49
MFES Factor 1 / emotional role	could not be computed †		0.51	0.30	0.47	0.14
MFES Factor 1 / mental health	0.06	0.92	0.55	0.26	0.53	0.10
MFES Factor 2 / SF physical function	-0.33	0.59	0.81	0.05	0.32	0.34
MFES Factor 2 / SF physical role	-0.33	0.59	0.50	0.32	0.42	0.20
MFES Factor 2 / SF body pain	-0.13	0.83	0.15	0.78	0.01	0.99
MFES Factor 2 / SF general health	0.35	0.56	0.73	0.10	0.75	0.01
MFES Factor 2 / SF vitality	0.51	0.39	0.75	0.08	0.77	0.01
MFES Factor 2 / social function	-0.49	0.40	0.13	0.81	-0.08	0.82
MFES Factor 2 / emotional role	could not be computed †		0.67	0.15	0.68	0.02
MFES Factor 2 / mental health	0.02	0.98	0.76	0.08	0.76	0.01

Table 3. Correlation matrices on functional tests (TUG time, 10m walk test), MFES (Factors 1 and 2) and SF-36 categories for the non-fallers, fallers and all participants combined.

10m WT: 10m walk test; MFES: Modified Falls Efficacy Scale; SF-36: Short-Form 36; TUG: Timed Up and Go test
Shaded areas indicate significant correlations at P<.01 and P<.05 levels.
** Could not be computed because all the non-fallers had the same (maximal) score for the emotional role SF36 health attribute.*

Relationships between falls efficacy (MFES) and physical performance

The relationship between falls efficacy and functional performance was measured by analysing Factors 1 and 2 of the MFES with TUG test and the 10-metre walk test (Table 3). In the non-fallers, falls efficacy on indoor-type activities (Factor 1) or outdoor-type activities (Factor 2) was not significantly correlated with the TUG test (r=.12 and r=.14, respectively) or 10-metre walk time (r=.49 and r=.49, respectively). Similarly, the fallers did not show any significant relationships between their falls efficacy and physical performance on any of the activities on the MFES scale. Falls efficacy on Factor 1 activities was not significantly correlated with TUG test (r=-.10 and r=-.41, respectively) or 10-metre walk time (r=-.59 and r=-.77, respectively). A trend for a strong negative correlation on 10m walk test performance and Factor 2 scores (r=-.77, P<.07) was noted. No significant relationships were found between falls efficacy and physical performance for all participants.

Relationships between falls efficacy (MFES) and health status (SF-36)

In the non-fallers, no significant correlations existed between falls efficacy as measured by the MFES and health status measured using the SF-36. Only two significant relationships were found for falls efficacy and health status in the fallers group (Table 3). Falls efficacy on indoor-type activities (Factor 1) was positively correlated with vitality (r=.86, P<.05), while falls efficacy on outdoor-type activities (Factor 2) was positively correlated with physical function (r=.81, P<.05). A trend for strong positive correlations was found for falls efficacy on outdoor-type (Factor 2) activities with vitality (r=.75, P=.08) and mental health (r=.76, P=.08). For all participants, vitality was positively correlated with falls efficacy on indoor, Factor 1 (r=.78, P<.01) and outdoor, Factor 2 activities (r=.77, P<.01). General and mental health were positively correlated with Factor 2 scores on the MFES and these relationships were all significant at the P<.05 level. Emotional role was also significantly correlated with Factor 2 scores at the P<.05 level.

Discussion

Functional performance tests

It is widely recognised that functional performance declines with increasing age 2-6 and as a consequence of disease or trauma resulting in the amputation of the lower-limb. 7-9 The first hypothesis related to performance of functional tasks and that the fallers would perform tasks more slowly. The TUG scores from the current study were not significantly different between the fallers and non-fallers. The lack of statistical significance could be attributed to the large SD among the fallers, and relative small sample size. Furthermore, the results showed that the functional performance scores did not differ between community-dwelling fallers and non-fallers suggesting that neither the TUG test nor the 10m walk test were sufficiently sensitive to distinguish otherwise independent amputee fallers and non-fallers in the current study.15

Large et al. (2006) suggested that it was a person's ability or inability to complete the TUG test that was the most important indicator for stratifying patients according to their risk of falls and concluded that excluding patients who were unable to complete the task failed to detect those at the highest risk for falls.22 The inclusion criteria of the current study stipulated that participants were able to perform the sit-to-stand task independently. It is likely that participants, who were at the greatest risk of falling, were excluded from the current study because of their inability to rise from a seated position independently. The TUG test has been associated with ceiling effects in particular when compared to the L test, especially for older, relatively fit people and younger people with amputation. However, the TUG test was selected for this study because it is a widely popular outcome measure used by physiotherapists working with amputees in the UK.23 Therefore, active amputees and older people might benefit from performing other measures, such as the L test.24 The L test is similar to the TUG test and was designed to reflect a higher level of skill. In addition to sit-to-stand transfers, the participant performs four turns to both the left and right sides and walks a greater distance.24 As the functional demands are greater with the L test, it is possible that such a test would have discriminated between the fallers and non-fallers in the current study.

The strong correlations found between TUG time and 10-metre walk time have been reported before.15 Speed is an overall good descriptor of functional performance but our results did not support the hypothesis that fallers would perform more slowly than the non-fallers or that functional performance on relatively simple tasks, such as level walking and rising from a seated position, would differ according to falls history.

Health status and falls efficacy data

The first hypothesis also stated the fallers would have lower falls efficacy on everyday activities and health status scores than the non-fallers. The health concepts included in the SF-36 represent health issues that have been shown to be most affected by disease and treatment.25 The results from this study have found that emotional role distinguished between amputees based on their falls history, and that self-rated general health and vitality were health-related factors that

showed trends between the two groups. Therefore these three health concepts could be indicative of how falls history impacts on health status among community-dwelling, transtibial amputees.

The mean MFES score was not able to distinguish between perceived falls efficacy in the non-fallers vs. fallers. This suggested that, like the TUG test, the MFES may show a ceiling effect in community-dwelling fallers, because it measures falls efficacy on relatively non-threatening activities.

Relationships between functional tasks and psychological components

The second hypothesis stated that poor functional performance would be associated with low falls efficacy and health status scores. Although just failing to reach significance (P=.06), general health was the only health concept on the SF-36 survey that negatively correlated with functional performance on the TUG test when all participants were grouped together and the correlations generally presented moderate (r>.3) to large (r>.5) effect sizes in this group.26 The results suggested that, 35% of the variance in functional performance could be explained by perceived general health. General health could be a good indicator of function, as those who rated their health as being poor (low score) also took the longest to complete the functional tasks (long TUG time). These findings support the notion that perceived general health is associated with overall performance on common daily tasks, such as transfers in/out of a chair, walking and turning.

Falls efficacy scores on outdoor-type activities showed a strong relationship to 10-metre walk time, but not TUG time, in the fallers. This was probably reflected by the nature of the walking tasks. In the home and during indoor-type activities, one rarely walks at a fast speed, whereas outdoor-type activities typically involve walking over longer distances (e.g. walking to the bus, walking around shops). Those individuals who had lower falls efficacy on outdoor-activities were those who walked slower. The correlations between falls efficacy and walking speed (10-metre walk time) showed strong relationships and large effect sizes in the fallers and for all participants, while the effect sizes were only small to moderate in the non-fallers. This finding further supports the notion that walking speed is a good overall descriptor of functional mobility and that outdoor activities are considered higher falls risks. It must be noted that a limitation to the MFES is that it does not account for seasonal changes or different walking surfaces. The participants all completed the MFES during a relatively warm time of year. Had they been asked to rate their falls efficacy, especially on outdoor activities, during a particularly snowy winter, the results could have been different.

Relationships between falls efficacy and health status

The third aim investigated the relationships between the SF-36 and the MFES and it was hypothesised that low health status scores would be associated with poor falls efficacy. Vitality showed the largest effect sizes on falls efficacy and health status factors for the fallers and the sample as a whole. Vitality reflects a person's overall energy levels and this was the only health attribute on the SF-36 that significantly, positively correlated with falls efficacy on indoor-activities in the fallers group. This probably referred to the notion that adequate vitality was more important for fallers than non-fallers in performing daily tasks confidently without falling. Being tired or worn out could potentially be a risk factor for falling in individuals who are already at a higher risk for falls. Not surprisingly, physical functioning was significantly, positively related with falls efficacy on outdoor-type activities in the fallers. Despite the small sample size, many of the correlations between falls efficacy and health status parameters were moderate to strong in the fallers. 26 This finding suggested that the use of self-report questionnaires, such as the MFES and SF-36, could provide a good description of how falling had an impact on a person's perceived health status and function. Conversely, the magnitude of the correlations was considerably lower for almost all of these variables and no significant relationships were found between falls efficacy and health status in the non-fallers. Individuals who presented a greater risk of falling (e.g. those who were institutionalised or in a wheelchair, or amputees with limited functional use of their prosthesis), but were excluded from the study because of the inclusion criteria, would likely have scored even lower than the current fallers on both the MFES and health status questionnaires.

Study limitations

The number of participants who fit the criteria for inclusion was relatively low and hence the study was underpowered; therefore the findings should be treated with some caution. Nevertheless, the data shed light on an important area of research that warrants further exploration with a lower limb amputee population. Participants were selected based on the inclusion criteria that they could perform the functional tasks independently and without a walking aid (e.g. crutch, stick). Therefore, the very nature of these criteria indicated that the participants could function independently and did not represent those most vulnerable to falling. Transtibial amputees form a population that is inherently highly variable, and participants were not matched for factors like cause of amputation (vascular vs. trauma). Therefore, extending the results to the wider amputee population should be approached with caution. Using a cross-sectional design, we were unable to differentiate the cause from the effect of falls efficacy and falls history. Future longitudinal studies would be able to establish whether fallers have lower falls efficacy as a consequence of their fall or whether the lack of confidence actually

contributed to the cause of the fall.

Conclusion

The findings from this study did not support the first hypothesis, no differences in functional performance times or falls efficacy between community-dwelling amputee non- fallers and fallers were found. The TUG test, 10m walk test and MFES showed ceiling effects and were not sufficiently sensitive to differentiate between independently living non-fallers and fallers. This may further limit the use of these tests with younger traumatic amputees. Perceived health status was associated with performance on daily tasks such as walking, turning and transferring from a seated to a standing position (TUG test), and therefore was considered a good indicator of overall function. The SF-36 results revealed that the consequences of falling may have more negative effects on mental, rather than physical health. In the fallers, low falls efficacy on outdoor-type activities was highly correlated with poor functional performance. Three of the eight health attributes on the SF-36 were correlated with falls efficacy in the fallers, whereas there were no relationships between the two questionnaires in the non-fallers.

References

1. Miller WC, Speechley M, Deathe AB. The prevalence and risk factors of falling and fear of falling among lower extremity amputees. Arch Phys Med Rehabil 2001;82:1031-6.
2. Kerrigan DC, Todd MK, Della Croce U, Lipsitz LA, Collins JJ. Biomechanical gait alterations independent of speed in the healthy elderly: Evidence for specific limiting impairments. Arch Phys Med Rehabil 1998;79:317-322.
3. Kerrigan DC, Lee LW, Nieto TJ, Markman JD, Collins JJ, Riley PO. Kinetic alterations independent of waking speed in elderly fallers. Arch Phys Med Rehabil 2000;81:730-735.
4. Mian OS, Baltzopoulos V, Minetti AE, Narici MV. The impact of physical training on locomotor function in older people. Sports Med 2007;37:683-701.
5. Tinetti ME. Performance-oriented assessment of mobility problems in elderly patients. J Am Geriatr Soc 1986;34:119-126.
6. Tinetti ME, Speechley M, Ginter SF. Risk-factors for falls among elderly persons living in the community. New Engl J Med 1988;319:1701-1707.
7. Vanicek N, Strike S, McNaughton L, Polman R. Gait patterns in transtibial amputee fallers vs. non-fallers: biomechanical differences during level walking. Gait Posture 2009a;29:415-420.
8. Vanicek N, Strike S, McNaughton L, Polman R. Postural Responses to Dynamic Perturbations in Amputee Fallers Versus Nonfallers: A Comparative Study With Able-Bodied Subjects. Arch Phys Med Rehabil 2009b;90:1018-1025.
9. Vanicek N, Strike S, McNaughton L, Polman R. Lower limb kinematic and kinetic differences between transtibial amputee fallers and non-fallers. Prosthet Orthot Int 2010;34:1-12.
10. Bishop MD, Meuleman J, Robinson M, Light KE. Influence of pain and depression on fear of falling, mobility and balance in older male veterans. J Rehabil Res Dev 2007;44:675-684.
11. Gillespie SM, Friedman SM. Fear of Falling in New Long-Term Care Enrollees. J Am Med Dir Assoc 2007;8:307-313.
12. Miller WC, Deathe AB. A prospective study examining falls efficacy among individuals with lower limb amputation. Disabil Rehabil 2004;26:875-881.
13. Miller WC, Deathe AB, Speechley M. Psychometric properties of the activities-specific falls efficacy scale among individuals with a lower-limb amputation. Arch Phys Med Rehabil 2003;84:656-661.
14. Askham J, Glucksman E, Owens P, Swift C, Tinker A, Yu G. A review of research on falls among elderly people. London King's College: Age Concern Institute of Gerontology; 1990.
15. Podsiadlo D, Richardson S. The Timed 'Up and Go': A test of basic functional mobility for frail elderly persons. J Am Geriatr Soc 1991;39:142-148.
16. Schoppen T, Boonstra A, Groothoff JW, de Vries J, Goeken LNH, Eisma WH. The Timed "Up and Go" Test: Reliability and validity in persons with unilateral lower-limb amputation. Arch Phys Med Rehabil 1999;80:825-828.
17. Watson MJ. Refining the ten-metre walking test for use with neurologically impaired people. Physiotherapy 2002;88:386-397.
18. Colleen FM, Wade DT, Bradshaw CM. Mobility after stroke: Reliability of measures of impairment and disability. Int Disabil Stud 1990;12:6-9.
19. Ware JE Jr, Sherbourne CD. The MOS 36-item short-form health survey (SF-36): I. Conceptual framework and item selection. Med Care 1992;30:473-483.
20. Lyons RA, Perry HM, Littlepage BNC. Evidence for the validity of the Short-form 36 Questionnaire (SF-36) in an elderly population. Age Ageing 1994;23:182-184.
21. Hill KJ, Schwarz JA, Kalogeropoulos AJ, Gibson SJ. Fear of falling revisited. Arch Phys Med Rehabil 1996;77:1025-1029.

22. Large J, Gan N, Basic D, Jennings N. Using the Timed Up and Go Test to stratify elderly inpatients at risk of falls. Clin Rehabil 2006;20:421-8.
23. Vanicek N, Strike S, McNaughton L, Polman R. The use of outcome measures in outpatient amputee rehabilitation in England. Brit Assoc Chart Physiother Amp Rehabil 2008; 29: 13-19.
24. Deathe AB, Miller WC. The L test of functional mobility: Measurement properties of a modified version of the timed 'Up and Go' test designed for people with lower-limb amputations. Phys Ther 2005;85:626-35.
25. Ware JE Jr, Gandek B. Overview of the SF-36 health survey and the international health status assessment

BACPAR Article – Study Afternoon Feedback

I recently attended a Lower Limb Prosthetic Checkout study afternoon organised by Lucy Holt and Jane Greiller, Specialist physiotherapists at the Oxford University Hospitals NHS Trust. The study afternoon was on 19th January 2012, and took place at the Nuffield Orthopaedic Centre.

The afternoon started with an informative presentation by Vicky Gardiner, Prosthetic manager. Vicky spoke about the service organisation, the numbers and types of referrals, with the data following national trends. She also spoke about the CPAC primary clinic for new lower limb patients, which is a multi-disciplinary assessment, and the patient's first contact with the limb fitting centre.

Vicky also went into some detail about prosthetic prescription, reinforcing the limits of some socket design and suspension in the early post-amputation period due to volume fluctuation. Often amputees in the early stages have lots of questions about sockets and suspension, so it is important that we are all imparting the same information to avoid any confusion that may occur.

The study afternoon then divided into two groups, a trans-tibial and a trans-femoral prosthetic checkout. Each group was led by a prosthetist, with patient demonstrations included. The trans-tibial session was presented by Katherine Ouseley, and the trans-femoral session by Caroline Ward. Both sessions went through comprehensive explanations of socket types, interfaces and suspension methods. There was also revision of pressure tolerant and pressure sensitive areas (always useful), and indications of correct fit and problem solving. The end of each session included tips and FAQs. As well as the patient demonstrations, it was also useful to be able to see the different types of sockets and suspensions, and be able to get hands-on with them in a learning environment.

It is perhaps, a sign of the times that the study afternoon was not well attended, however, for those of us lucky enough to attend it was a rare chance to spend time with the prosthetists and specialist physiotherapists. There was lots of opportunities to ask questions, and many thanks to the amputees who gave up their time to make the study afternoon such a success. A big thank you should also go to Lucy, Jane, Vicky, Katherine and Caroline, the study afternoon it has left me with a real sense of being part of a bigger team, has answered a lot of questions, and has filled me with an increased confidence to continue providing an improving service to my patients.

Gail Murray - Band 7 Physiotherapist

Femoral Nerve Palsy in a Trans Tibial Amputee Following a Complex Total Hip Replacement

An established right trans tibial amputee underwent a Complex Total Hip replacement (THR) in October 2011. The 45 year old female patient had undergone trans- tibial amputation aged 7 as a result of spina- bifida and related deformity of the right foot and ankle. Prior to the THR she had a history of right hip pain of increasing severity and had undergone corrective surgery for the hip.

She is an extremely accomplished prosthetic user with 2 prostheses with PTB sockets, Accent patient adjustable heel or Multi Flex foot and ankle, and cuff suspension. Her residual limb is relatively short. The patient works, has children and mobilises independently with her prosthesis.

She presented to us one week after the THR, she was unable to wear her prosthesis through oedema in the right residual limb and thigh. She also reported reduced sensation in the thigh and much reduced activity in the muscles controlling the residual limb. This had been discussed with the Orthopaedic Surgeon before her discharge from hospital and he had diagnosed a Femoral Nerve palsy. The patient complained of a burning sensation, but also a coldness in the right thigh and residual limb.

On examination:

- There was extensive bruising at the proximal medial thigh.
- She had no active extension of the knee, but had maintained full passive extension.
- Active flexion of the hip was more reduced in power than abduction and extension
- She was not able to don the prosthesis through oedema so a compression stump shrinker was provided and measurements taken for a Custom Juzo that would have an improved fit.

At this point exercises were advised to maintain the hip range of movement and muscle function around the hip, exercises to promote knee extension. Imagined movements (1) of the right foot and ankle were also encouraged to promote recovery and some muscle stimulation in the calf to reduce oedema. The patient was hopping with her elbow crutches in an effort to maintain a good level of ADL at home; she was encouraged to do this only as was essential. We planned to review her after her 6 week post op check with the orthopaedic surgeon. She was off work.

At the patient's orthopaedic review, the surgeon, was unable to tell the patient how long the palsy would be likely to persist (but that it could be up to 24 months) and he arranged for the patient to undergo a neuro physiological assessment and nerve studies (the patient was still awaiting this appointment on the 25th January 2012). The consultant also suggested that the use of TENs would be appropriate to improve nerve recovery and had prescribed gabapentine to reduce the pain and muscle cramps she was experiencing in her residual limb at night.

The patient returned to us for a review. The length of the prosthesis was reduced to accommodate the increase in femoral length gained following the THR, some reduction in oedema enabled the patient to don the prosthesis without the use of the pelite liner, a suspension sleeve was added to aid suspension and offer stability to the knee. At this point she was able to mobilise with the prosthesis with 2 elbow crutches for short periods and short distances.

Following a short period of illness, we commenced the use of the PPAM aid (a new experience for the patient) to enable the hip to experience some weight bearing, reduce the oedema and facilitate the quadriceps recovery. Also, because the Physio had been on an Electro Acupuncture (EA) course the previous weekend, and had had the opportunity to consult with Panos Barlas (http://www.atchp.co.uk/ATCHPBar.html) re the use of TENS to stimulate nerve recovery, TENS was also commenced.

The TENS pads were applied to the sensate area of the lateral aspect of the thigh, and 30 mins of high frequency TENS was carried out. The intensity produced a desired muscle twitch in the lateral thigh. The patient was provided with the machine and advised to continue with the treatment but at no greater frequency than twice per week and for no longer than 30 minutes at a time to prevent the development of tolerance to the stimulation (another piece of information that had been acquired on the EA course) (Liebano et al 2011).

Mobilisation with the PPAM aid progressed from within the parallel bars to the use of a walking frame. The patient continued to increase her confidence in use of the elbow crutches with the prosthesis. Reporting some medialisation of the sensation in her thigh, there was improvement in hip flexor control but quadriceps inactivity persisted. The team then liaised with the orthopaedic consultant requesting an orthotic appointment. An appointment was provided; we envisaged

the provision of a splint on a temporary basis whilst a custom made device was to be manufactured. Burning pain persisted at night and the patient was advised to increase the Gabapentine dose before bed. She continued to use the TENS machine as prescribed.

The patient had a fall, when her knee gave way whilst walking with one elbow crutch, the right knee was bruised, but the hip joint was fine, subsequently, co-incidentally?, on examination one week later some improvement in quads activity was demonstrated. She was able to gain some extension of the knee (an extensor lag of 70 degrees). We attended the orthotic appointment with the patient to discuss the patient's needs, at this point the extensor lag was now just 30 degrees. A soft knee splint was applied over the prosthesis. The hinges were reversed to prevent the knee from flexing. The patient was now able to walk fully weight bearing.

One week later (now 3 months post THR) the patient attended for a cast for a refit socket with a view to reverting to the use of a pelite liner and correction of alignment to an optimal position accommodating changes as a result of the THR effect (abd/adduction and rotation changes) as well as a review of the length.

At her fit delivery appointment (2 weeks later) (the last appointment before this case study was written)

- The patient had returned to work
- Had full knee extension with no lag but some weakness.
- Persistent lack of sensation of the medial aspect of the thigh, including the knee.
- Was continuing with hip muscle range of movement and strengthening exercises (glutes)
- Knee extension exercises in lying and standing
- Continuing use of the TENs having moved the electrodes medially closer to the area of reduced sensation.

So, what has facilitated the recovery of the femoral nerve?

1 TENs
2 The PPAM aid
3 Exercises
4 Normalisation of function
5 The fall
6 Time

Or a combination of some or all of the above. We don't know, but if a patient presented with the same problem again in the future, we would do everything the same again… except maybe the fall?

We will continue to review the patient, monitoring the recovery of her sensation and muscle control around the hip and knee.

Paula Griffiths - Senior Prosthetist & Louise Tisdale - Physiotherapist

References

1 http://www.gradedmotorimagery.com/
2 Liebano RE, Rakel B, Vance CG, Walsh DM and Sluka KA (2011) An investigation of the development of analgesic tolerance to TENs in humans, Pain 152 (2) 335-42.

Moving and Handling of Patients who have Undergone Lower Limb Amputation – a Pilot Study

Introduction

After a lower limb amputation patients have specific moving and handling needs and specialist equipment may be required (National Back Pain Association 1997). Patients who have had a lower limb amputation have a 1 in 5 chance of falling while in an acute hospital and 29% of these falls occur during transfers (Pauley et al 2006). Therapists should be able to provide appropriate advice to patients and the multidisciplinary team regarding transfer technique post amputation (Broomhead et al 2006).

Feedback from the multidisciplinary team in an Acute Hospital Trust highlighted the need for a guideline to address moving and handling with patients who have undergone a lower limb amputation. Specialised guidelines have already been developed for moving and handling in particular circumstances such as during resuscitation (Resuscitation Council (UK) 2009) or with specific client groups, for example bariatric patients (Horncastle and Coulling 2011).

A literature search using MEDLINE (1950 – present day), CINAHL (1981 – present day) and AMED (1985 – present day) did not reveal any relevant evidence on which to base a guideline. In the absence of evidence a pilot study was designed with the following aims:

- To establish if therapists are currently using specific guidelines for moving and handling patients after a lower limb amputation.
- To identify any consensus of opinion regarding moving and handling of patients after lower limb amputation.

Methodology

Data was collected using an on-line questionnaire involving 10 questions (Appendix 1). Questions were designed to meet the aims of the study and to provide additional demographic data regarding respondents' areas of practice and levels of expertise. Closed questions were used to ensure definite answers and respondents were invited to make additional comments when appropriate.

The questionnaire was created using free software that provided a web link and ensured all responses were confidential. A request for participants and a link to the questionnaire was posted on the Amputee Rehabilitation section of the Interactive CSP (Chartered Society of Physiotherapy) website and on the College of Occupational Therapists Trauma and Orthopaedics Specialist Section discussion forum. The request stipulated that participants had to be currently working with amputees or have previous experience with amputee rehabilitation. Data collection took place for one month.

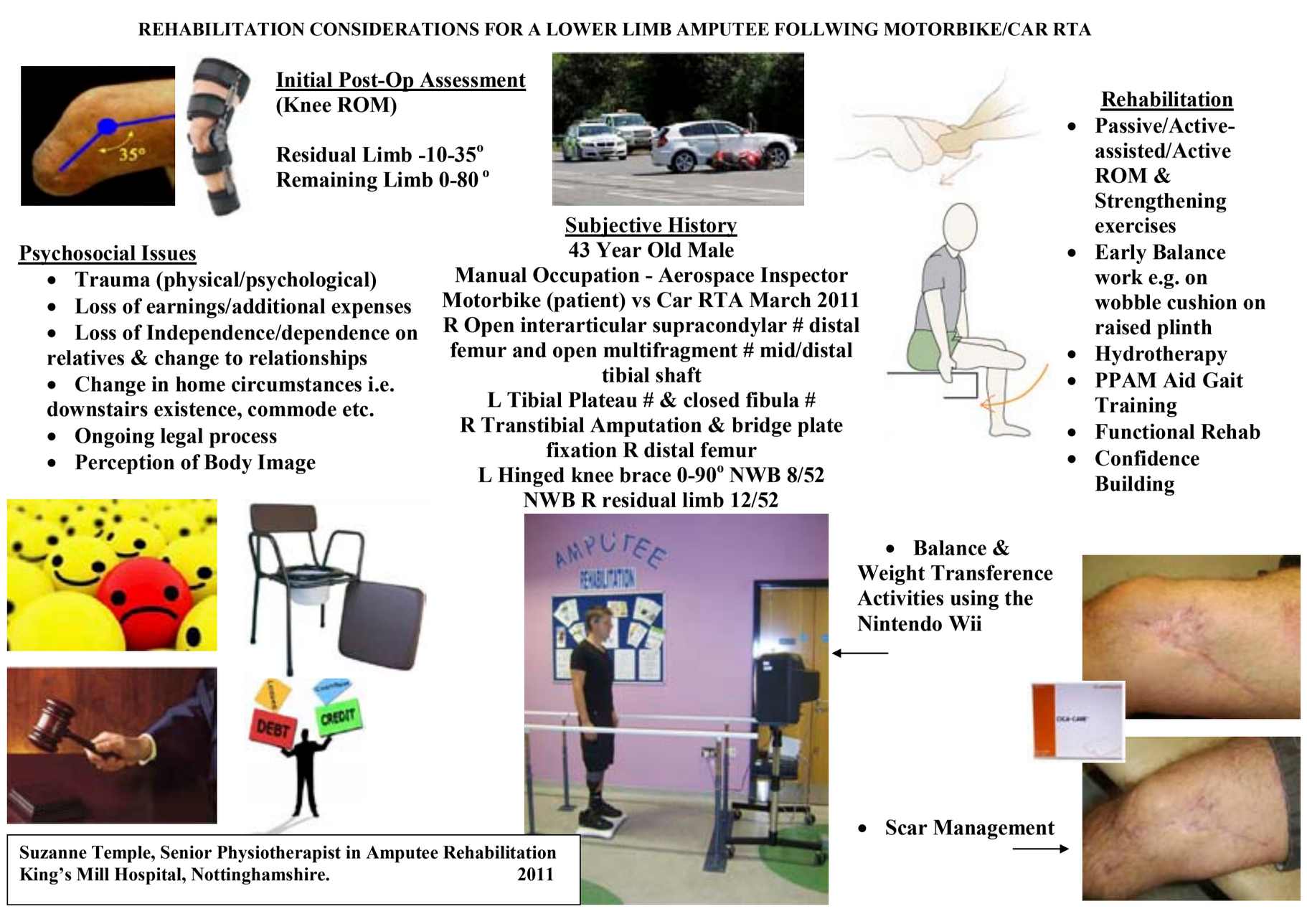
Results

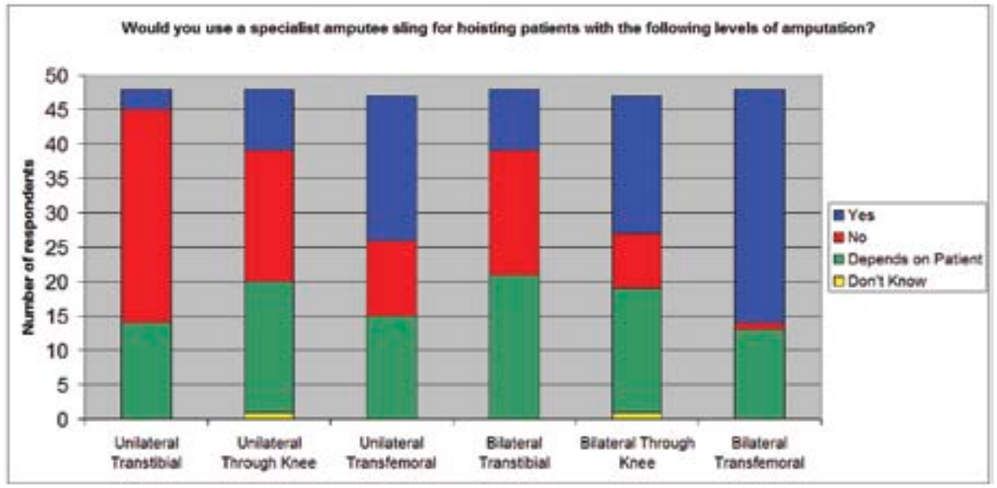
Results for the 10 closed questions can be seen in Appendix 1.

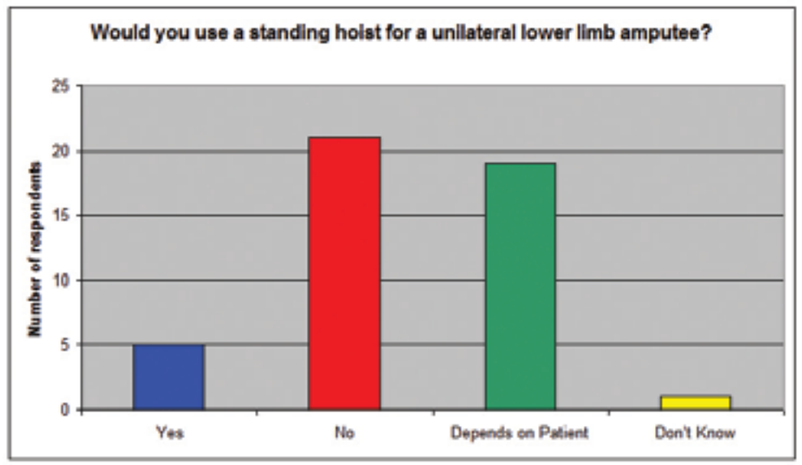
The number of respondents reached 46 during the month of data collection; this included 38 physiotherapists and 8 occupational therapists. Respondents most commonly treated patients who had an amputation due to dysvascularity (91.3%). The majority of respondents (67.4%) worked for an Acute Hospital Trust with smaller numbers working for Rehabilitation Hospitals (15.2%) and Disablement Service Centres (13%). Respondents were mainly employed at Band 7 or higher level on the Agenda for Change grading system (60.9%).

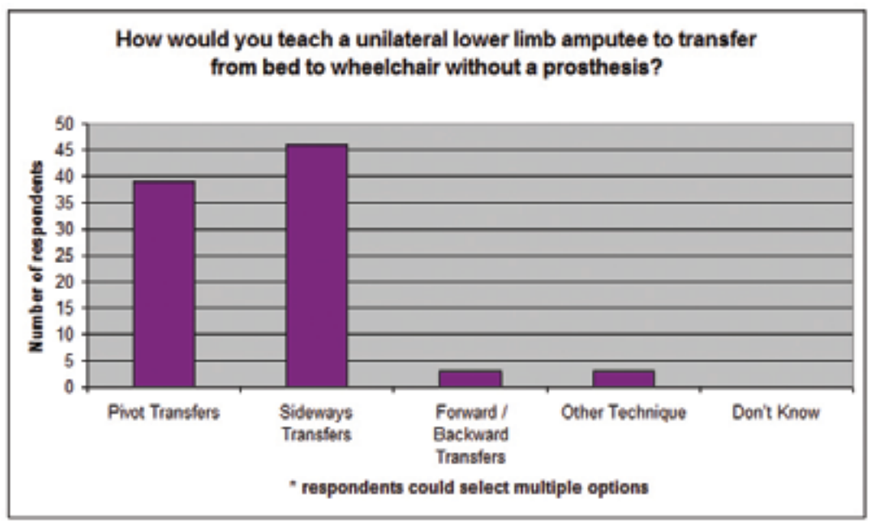
Respondents were asked if there is a specific policy for the moving and handling of patients after a lower limb amputation. The majority of respondents reported there is not a policy (82.6%) with the remainder being aware of a specific policy (15.2%) or not knowing if one exists (2.2%).

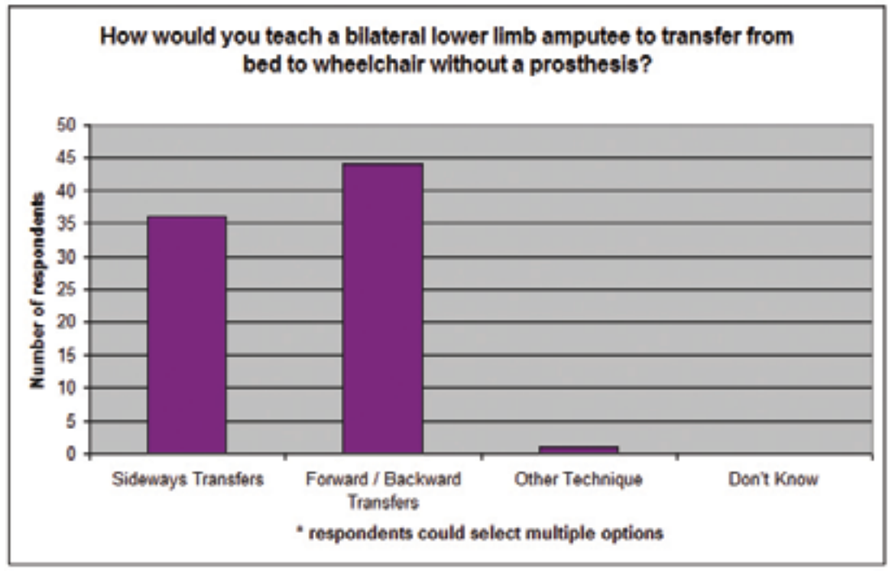
Respondents had mixed opinions as to the requirements for specialist amputee slings when hoisting. Opinions regarding the use of a standing hoist were also divided, with 45.7% choosing not to use one. Respondents all teach unilateral amputees to transfer using a sideways technique. For bilateral amputees without a prosthesis forward / backward transfers were the most commonly taught. Respondents were then asked how they communicated the most appropriate moving and handling technique with other members of the MDT. The majority communicated verbally (78.3%).

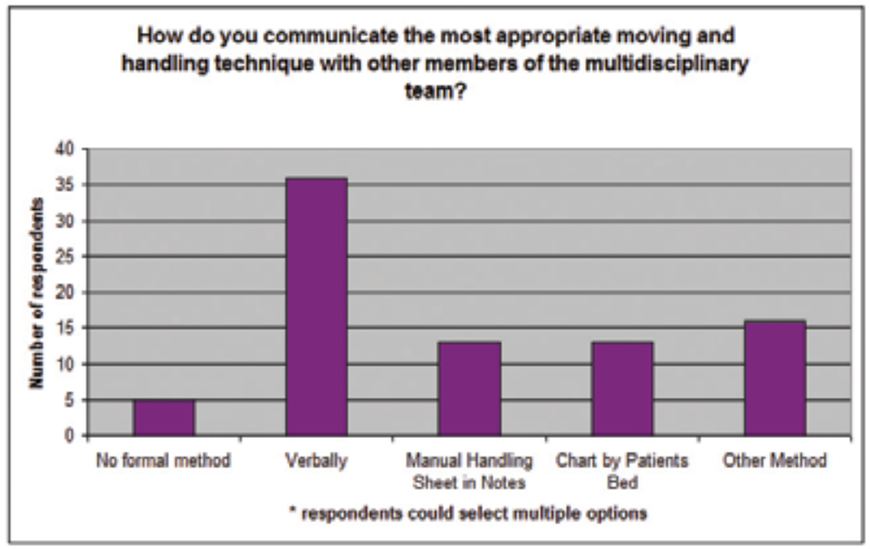












Discussion

Questions 1-4: Demographic data

Respondents were mainly physiotherapists; this may be accounted for by higher levels of traffic to the Interactive CSP website compared to the Occupational Therapy website. If the questionnaire was sent directly to potential respondents it may allow greater participation from occupational therapists. In addition, to ensure full representation of the multidisciplinary team the Nursing Profession should also be consulted.

Demographic data revealed dysvascularity was the most common reason for patients to have had their amputation. This accurately reflects the population of amputees in the UK as NASDAB reported 72% of lower limb amputees referred during 2006/2007 were due to dysvascularity.

In an attempt to monitor respondents' expertise they were asked to record their position on the Agenda for Change

grading system. This demonstrated that 60.9% were employed at Band 7 level or higher but it does not necessarily mean respondents had experience with amputees. Instead it may have been more appropriate to ask respondents how long they have been working within the field of amputee rehabilitation.

Question 5: Use of a specific policy

As may have been expected 82.6% of respondents did not have a specific policy for the moving and handing of patients after a lower limb amputation at their place of work. On reflection it would have been useful to have expanded this question by requesting further details on the policies already in use.

Question 6: Use of specialist amputee hoist slings

Through the additional comments made by respondents it was apparent that use of specialist amputee hoist slings depended upon the make of hoist. In order to look at current practice in greater detail data collection needs to include the make of hoist used. Despite variation in hoist manufacturer the majority of respondents would not use a specialist sling for a unilateral transtibial amputee (67.4%) whereas the majority of respondents would use a specialist sling for a bilateral transfemoral amputee (73.9%).

Question 7: Use of a standing hoist

Respondents raised concerns using the standing hoist for vascular patients due to the potential for trauma to their remaining limb. It was suggested the use of a standing hoist should depend upon the cause of amputation. A respondent also commented that a standing hoist may be used for a transtibial amputee wearing a prosthesis but not for those with higher levels of amputation.

Question 8: Transfers for unilateral amputees

All the respondents identified sideways transfers as a method they use to teach unilateral amputees to transfer. Respondents suggested that sideways transfers should be taught first and pivot transfers can then be used as a progression if appropriate. A respondent commented that they have used forward / backward transfers for patients who have a non-functioning remaining limb. The other techniques identified by a very small minority (6.5%) included use of a turntable or a Zimmer frame.

Question 9: Transfers for bilateral amputees

Respondents reported that forward/backward transfers allow for the decrease in balance experienced post bilateral amputation and are therefore the most commonly used technique. Sideways transfers were also a popular method although several respondents commented that these would only be undertaken after a balance assessment.

Question 10: Communication methods

The majority of respondents use verbal communication combined with another method in order to relay information about moving and handling technique. The use of different communication methods reported is likely to have varied depending on the setting for rehabilitation. Communication in a large multidisciplinary team may require a different approach compared to teams with just a couple of members. Other methods identified by respondents included use of electronic notes and completion of a multidisciplinary information sheet.

Limitations

Many of the limitations of this pilot study have already been mentioned in the discussion. However, it is worth highlighting the reoccurring theme around the limited number of questions and lack of specifics. Questions could be made more detailed and specific in order to improve the quality of data collected. On the other hand it should be remembered that a more detailed questionnaire may discourage participants due to the time involved and result in a reduced sample size.

Conclusion

This pilot study demonstrates a need for further research regarding moving and handling of patients after lower limb amputation. It acts as a starting point but in order to achieve a consensus of opinion the limitations of this pilot study need to be addressed. Until further research is available we are working on combining the results of this study with clinical experience to develop a local guideline for use by the multidisciplinary team.

Fiona Brett – Vascular Clinical Specialist Physiotherapist & Nadine Gisby – Vascular Clinical Specialist Occupational Therapist

References

Broomhead, P., Dawes, D., Hancock, A., Unia, P., Blundell, A., & Davies, V. (2006). Clinical guidelines for the pre and post operative physiotherapy management of adults with lower limb amputation. London: Chartered Society of Physiotherapy

Horncastle, C. and Coulling, S. (2011) Protocol for the Moving and Handling of Bariatric Patients. [online] East Kent Hospital University NHS Foundation Trust. Available from: http://www.ekhuft.nhs.uk/home-page/search/?q=bariatric+manual+handling+guidelines
[accessed 6th February 2012]

NASDAB (2009) The Amputee Statistical Database for the UK 2006/07. [online] Limbless Statistics. Available from: http://www.limbless-statistics.org/documents/Report2006-07.pdf
[accessed 6th February 2012]

National Back Pain Association. (1997). The guide to the handling of patients – introducing a safer handling policy. 4th ed. London: National Back Pain Association.

Pauley, T., Devlin, M., & Heslin, K. (2006). Falls sustained during inpatient rehabilitation after lower limb amputation: prevalence and predictors. Am. J. Phys. Med. Rehabil. 86 (6), pp. 521-232

Resuscitation Council (UK) (2009) Guidelines for Safer Handling during Resuscitation in Healthcare Settings. London: Working group of the resuscitation council (UK).

APPENDIX 1

Questions and results

Question 1:
In your place of work do you have a specific policy for the moving and handling of patients after a lower limb amputation?

Yes = 7 No = 38 Don't know = 1 (46 respondents)

Question 2:
Which professional group do you belong to?

Physiotherapy = 38 Occupational Therapy = 8 (46 respondents)

Question 3:
What are the main causes of amputation for the patients you regularly treat?

	Response Count (46 respondents – could select multiple options)
Dysvascular (Diabetes or Vascular)	42
Trauma	8
Oncology	2
Congenital	1
Other	1

Question 4:
Which of the following best describes your work setting?

	Response Count (46 respondents)
Acute Hospital Trust	31
Disablement Services Centre	6
Rehabilitation Centre	7

Community	1
Other	1

Question 5:
Within what band on the Agenda for Change grading system are you currently employed?

Band 5 = 6 Band 6 = 8 Band 7 = 27 Band 8 or above = 1 Response Count (46 respondents)
Other (not on Agenda for Change pay scale) = 4

Question 6:
Would you use a specialist amputee sling for hoisting patients with the following levels of amputation?

	Yes	No	Depends on specific risk assessment	Don't know	Response Count
Unilateral Transtibial	3	31	14	0	46
Unilateral Through Knee	9	19	19	1	46
Unilateral Transfemoral	21	11	15	0	45
Bilateral Transtibial	9	18	21	0	46
Bilateral Through Knee	20	8	18	1	45
Bilateral Transfemoral	34	1	13	0	46

Question 7:
Would you use a standing hoist for a unilateral lower limb amputee?

Yes = 5 No= 21Depends on specific risk assessment = 19 Don't know =1 (46 respondents)

Question 8:
How would you teach a unilateral lower limb amputee to transfer from bed to wheelchair without a prosthesis?

	Response Count (46 respondents – could select multiple options)
Pivot Transfers	39
Sideways Transfers	46
Forwards/backwards Transfers	3
Other Technique	3
Don't Know	0

Question 9:
How would you teach a bilateral lower limb amputee to transfer from bed to wheelchair without a prosthesis?

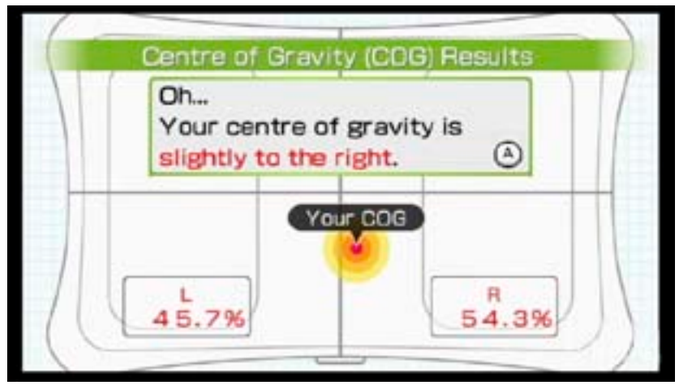
	Response Count (46 respondents - could select multiple options)
Sideways Transfers	36
Forwards/backwards Transfers	44
Other Technique	1
Don't Know	0

Question 10:
How do you communicate the most appropriate moving and handling technique with other members of the multidisciplinary team?

	Response Count (46 respondents – could select multiple options)
No formal method	5
Verbally	36
Manual handling sheet in notes	13
Chart by patients bed	13
Other method	16

Wii Fit and Lower Limb Amputee Rehabilitation During a Placement at Basildon University Hospital

The Wii Fit has been used with lower limb amputee patients in hospitals around the country for a while. In two BACPAR articles from 2009[1] I read how hospitals have worked with the Wii Fit and found it to be beneficial. However, at Basildon University Hospital the Wii Fit had not been used to its full advantage; possibly due to the lack of information available to get the best results for patients and physiotherapists. Basildon Hospital already has a successful rehabilitation programme and it was during my recent placement I was encouraged to work with the Wii Fit. I was keen to use the balance board with patients at different stages of their rehabilitation.



The BACPAR Guide for Use of Nintendo Wii Fit in the Department [2] was a first port of call for information on using the Wii Fit with amputee patients. With their guidelines and precautions the rehabilitation team was able to start using Wii Fit on a more regular basis with patients of different amputation levels and prosthetic rehabilitation stages. I decided to put the Wii Fit to the test and see how patients responded to the balance board, if they improved and how the games are played. The trial was conducted with two patients; a late stage below knee and an early stage above knee. Both patients took part in the body test and a few appropriate games according to the Ossur Wii Fit for Lower Limb Prosthetic Users [3]. This guide highlights the appropriate games for either transfemoral or transtibial amputees with the relevant modifications needed for certain activities to take place. Some of these activities seemed to be for those that were in the very late stages of rehabilitation or those who are using it at home once being discharged from hospital. We started with the BACPAR recommended questionnaire which can be found in the BACPAR Guide for Use of Nintendo Wii Fit in the Department [1]; played the same games and took the body test on two separate occasions. Although both patients only used the Wii Fit on these two occasions, they both improved and did significantly better on their centre of gravity. As you can see from Figure 1 after using the Wii Fit just twice the patients had already improved. After this trial I spoke to the patients to see how they felt about using the Wii Fit and if they could see any improvement. One patient said he felt that being able to see a visual guide displaying their centre of gravity early on in their rehabilitation helped; as it can give feedback in a way that a mirror can not. The other patient said how she would have liked to have used the balance board at the start of her rehabilitation as a guide to weight transfer.

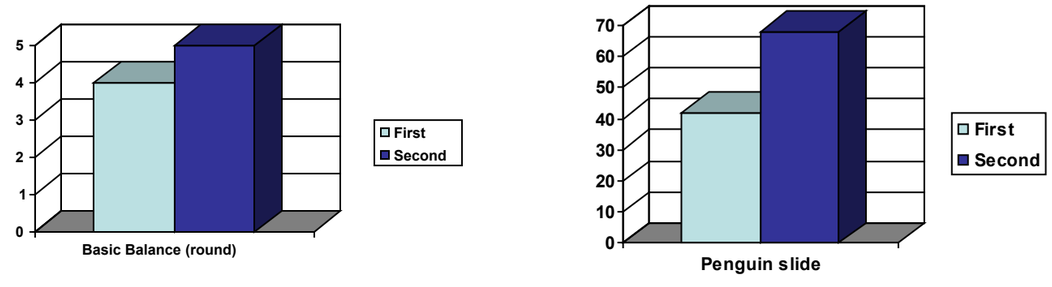


Figure 1

The Wii Fit is great for people of all ages and abilities; for those who respond well to visual feedback then the Wii Fit can become a useful tool within a rehabilitation setting. The benefits for the physiotherapist are that they can also see where a patient is transferring weight and if the patient can put weight though their prosthesis. The Wii Fit comes with good outcome measures; Wii Fit age, results from body test and games and if a patient's gait changes since using the balance board. Other benefits noticed when using the Wii Fit were how a patient improved at the activities or body test; this can lead to a substantial confidence boost and in turn can motivate the patient. The fun and sometimes competitive

element to using the Wii Fit can change a patient's rehabilitation; especially if they have been plateau-ing and motivation diminishes.

What does not seem to be researched is the use of the Wii Fit for patients who are pre-prosthesis. As the balance board can be used in sitting it can be a good exercise for patients at the very start of their rehabilitation. The body test can help with centre of gravity which may come in useful with use of early walking aids leading to prosthesis. Balance games can help with weight transfer which can help with early transfers and positioning. The triceps extension exercise and some yoga positions for posture can be started in early post-operative rehabilitation as they can be done in a seated position. Bi-lateral amputees may find the exercises in the seated position beneficial for balance and posture. When we looked at the Wii Fit Balance Board Patient Questionnaire (see Figure 2) with patients it we noticed there was nothing regarding phantom pain. At Basildon Hospital the amputee department had been looking at a Brodie et al4 study that looked at the effects of moving a virtual limb on phantom pain. During this study Brodie et al used mirror therapy; it was discussed that if this can have a positive effect on phantom pain then so can using the Wii Fit. As patients are using their prosthesis for functional activities and can see their virtual character playing the games it would be interesting to see if this can modify the experience of phantom pain. At Basildon Hospital staff will incorporate phantom pain and phantom sensation questions in their considerations for patients using the Wii Fit. A recommended style of question has been designed (see figure 3) so staff can monitor if using the Wii Fit can help with phantom pain.

Wii Fit Balance Board
A Patient Questionnaire

Name _____
DOB _____
Level of Amputation _____
Date of Amputation _____
Prosthesis fit/Delivery date _____

Prior to first use of Wii balance board please answer questions 1 to 4

1 Has your therapist discussed equal weight bearing with you while wearing an early walking aid or prosthesis?
Yes ☐ No ☐ Not sure ☐

2 Has your therapist described "Centre of Gravity" to you?
Yes ☐ No ☐ Not sure ☐

3 Did you understand what was meant by the term centre of gravity?
Yes ☐ No ☐ Not sure ☐

4 Have you used a Nintendo Wii games console before?
Yes ☐ No ☐ Not sure ☐

Once experienced the balance board please answer questions 5 to 11

5 After using the Wii balance board do you have any better understanding of "Centre of Gravity"?
Yes ☐ No ☐ Not sure ☐

6 Were you surprised to see where you were taking your weight, when compared to where it should be?
Yes ☐ No ☐ Not sure ☐

7 Were you able to correct this and become more central when re-tested?
Yes ☐ No ☐ Not sure ☐

8 Do you feel you have improved after using the balance tests and games?
Yes ☐ No ☐ Not sure ☐

9 Are you more aware of your centre of gravity?
Yes ☐ No ☐ Not sure ☐

10 Can you correct your centre of gravity without using the balance board?
Yes ☐ No ☐ Not sure ☐

11 Have you enjoyed your experience with the balance board?
Yes ☐ No ☐ Not sure ☐

Thank you

Figure 2

Have you experienced phantom pain or sensation?

Yes ☐ No ☐

If yes please explain type of pain/sensation

0 1 2 3 4 5 6 7 8 9 10

No Pain/ Sensation — Worst Pain/Sensation

Figure 3

When using the Wii Fit with patients we found that some modifications may still need to be added depending on the level of rehabilitation the patient is at. We also noted that as the Wii Fit was originally used for weight loss and exercise the body test includes BMI and weight. For our patients this was not a problem as they understood why we skipped passed this section. For a patient who is concerned about their weight this may then have an opposite effect on why we are using the Wii Fit. We therefore felt we should explain this to patients before they undertook the body test.

Patients and staff found the Wii Fit to be good fun and beneficial for everyone involved. The console is widely available from £129 and the Wii Fit and balance board from £89.99 at Argos [5]. Hospitals and rehabilitation centers should consider what a useful tool the Wii Fit can be.

Lauren Burrows - Student Physiotherapist University of Essex

References

1. BACPAR Journal Spring 2009, BACPAR Journal Autumn 2009

2. The BACPAR Guide for Use of Nintendo Wii Fit in the Department. 2009 (online) Available at www.wiihabilitation.co.uk/amputees.shtml

3. Ossur Wii Fit for Lower Limb Prosthetic Users. 2009 (online) Available at www.wiihabilitation.co.uk/amputees.shtml

4. Brodie, E; Whyte, A and Niven, C Analgesia through the looking glass? A Randomized controlled trail investigating the effects of viewing a 'virtual' limb upon phantom limb pain, sensation and movement. In European Journal of Pain 11 (2007) 428 - 436

5. Argos (online) Available at http://www.argos.co.uk/static/Browse/ID72/14419743/c_1/1%7Ccategory_root%7CVideo+games%7C14419738/c_2/2%7Ccat_14419738%7CNintendo+Wii%7C14419743.htm Accessed 2.2.12

Measuring Patient Satisfaction in Lower Limb Amputees After One Year of Prosthetic Use

Using the Trinity Amputation and Prosthesis Experience Scales (TAPES)

Introduction

The Trinity Amputation and Prosthetic Experience Scale (TAPES) was produced in 2000 by the Department of Psychology, Trinity College, Dublin. It may be freely copied and downloaded for teaching, clinical and/or research purposes (www.tcd.ie/psychoprosthetics).

"The TAPES is a multidimensional assessment designed to facilitate examination of the psychosocial processes involved in adjusting to a prosthesis, the specific demands of wearing a prosthesis and the potential sources of maladjustment. The TAPES comprises a Psychosocial Scale with three factor analytically derived subscales consisting of five items each (General Adjustment, Social Adjustment, and Adjustment to Limitation).

The second section consists of an Activity Restriction Scale incorporating three factors analytically derived subscales with four items each (Functional, Social and Athletic Restriction). The third section concerns Satisfaction with the Prosthesis and comprises ten items, which are subdivided into three factor analytically derived scales, the Functional, Aesthetic and Weight characteristics of the prosthesis. The fourth section explores the experience of phantom limb pain, residual limb pain, and other medical conditions not related to the amputation.

Each of these is subdivided into questions relating to how often it is experienced, how long each episode lasts, how the level of pain could be described and the extent to which it interferes with their daily lifestyles. This section also incorporates two items requesting respondents to rate their health and physical capabilities. Overall, the TAPES consists

of 54 items and administration time is approximately 15 minutes." Gallagher and MacLachlan (2000).

TAPES has been recommended for use in the recently published "Occupational Therapy with people who have had lower limb amputation" guidelines. (March 2011) and was included in the BACPAR Toolbox of Outcome Measures (February 2010). It was reported to hold good reliability and validity. The entire scale does not have to be used and you can select specific sub-scales.

Patients who receive a prosthesis from the Maltings Mobility Centre , including those who are seen in the satellite clinics at Telford, Dudley and Walsall are offered appointments at 3, 6 and 12 months post them taking their prosthesis "home". These appointments are an MDT review and goals made early in their rehabilitation process are reviewed and updated as appropriate.

Aims of the audit:

1. To understand patients' mobility and function at 1-year post delivery of a prosthesis.
2. To understand how patients feel about their prosthesis, appearance, functionality and comfort.
3. To understand the frequency and severity of pain (Phantom limb pain, residual limb pain and other symptoms) in patients at 1-year post delivery of a prosthesis in preparation for the 12/12 MDT post delivery review.
4. To understand the social and emotional aspects related to amputation and prosthetic use for patients at 1-year post delivery of a prosthesis.

Methodology

One of the authors was contacted to inform them that the service was planning to use TAPES. A TAPES Users' Brief Project Description Form was completed and sent to pamela.gallagher@dcu.ie. I was sent a copy of the scoring sheet in response. In all 4 clinics, clinical staff are asked to document on the appointment overview sheet at the front of the patient record, the date of the delivery of the prosthesis to the patient in their "home".

From this date MDT reviews are generated at 3, 6 and 12 months post delivery. In advance of the date of the 12 month post delivery appointment, the questionnaire is posted to the patient, with a stamped addressed envelope with a letter of explanation re the purpose of the questionnaire. On return of the questionnaire the responses were scored as per the instructions found on the (www.tcd.ie/psychoprosthetics) website. All appropriate members of the MDT were alerted to the presence of the completed questionnaire in the correspondence section of the patient record.

If a low score (less than 15) was recorded for the individual in the psychosocial subscales the relevant counsellor was specifically alerted to this. If a low satisfaction with the prosthesis subscale was recorded the relevant prosthetist was specifically alerted to this. The responses within the completed TAPES were then to be utilized to inform the 12-month post delivery review with the MDT; in particular the information about reported pain and function. Also as part of the audit MDT staff members also asked (by email) to feedback re the value of the measure to their practice.

Results

Between March 2010 and March 2011, 37 questionnaires were posted out to patients who would be due for a 12 month post delivery review appointment in all 4 clinics.

- 1 was completed within the centre, the patient was registered blind and upon questioning he felt it would be easier to complete it with a member of the MDT
- 31 questionnaires were returned completed.
- 1 patient was not sent the questionnaire as the MDT felt that the patient was not well enough to complete the questionnaire.
- 1 patient returned her questionnaire not completed with an accompanying letter stating that she was unable to wear her limbs. She has subsequently been reviewed and limb fitting has recommenced.
- 2 patients failed to complete the form fully- 1 stating that problems not related to his amputation were more problematic than his amputation and prosthetic use.

In response to the emailed request for feedback from the MDT re the value of TAPES to their practice. There were 4 responses

- 1 from a Physiotherapist in the Satellite clinic
- 2 from Prosthetists
- 1 from a Counsellor

In a review of the responses the following comments were made;

- TAPES is useful to ascertain areas of concern from patients that they had not previously reported.
- To balance our perceptions of the patient. It seems to allow patients to provide honest responses.
- It is useful for feedback from patients that are not being regularly reviewed by individuals within the MDT at the 12 month post delivery point.

Outcomes and Actions (in order of priority)

1. The response to TAPES from the MDT has been favorable. The MDT has decided to issue a TAPES questionnaire in advance of each and every 12/12 prosthetic review that will be held at the Maltings Mobility Centre (MMC) .The TAPES questionnaire will be sent out from MMC 1- month in advance of the appointment to allow the opportunity to review the responses in advance of the appointment. The relevant members of the MDT will be alerted to any changes in restrictions, psychosocial adjustment and satisfaction with the prosthesis that are not positive, once this has been established sufficiently to enable comparisons to be made.
2. TAPES will continue to be issued to all patients in advance of the 12 month MDT post delivery review in all clinics.
3. The majority of patients completing the questionnaire reported high levels of Athletic Activity restriction. However there are a small proportion of patients who will report lower levels of restriction in this subscale and therefore it will continue to be included in the questionnaire we issue.
4. All relevant members of the MDT will be alerted to the receipt of the completed TAPES questionnaire from a patient. This will allow the opportunity for the MDT to review the responses in advance of appointments. The counsellor will be specifically alerted to responses scoring less than 50% of the ideal score in the Psychosocial Adjustment scales.
5. In response to a review of the Guidelines for the Prevention of Falls in Lower Limb Amputees (2008) a questionnaire has been devised which is also sent out to patients (attending MMC) with the TAPES to understand their incidence and risk of falls. An environmental assessment is offered to patients who have identified falls within their homes.
6. Non limb wearers' account for 32% of all individuals who have undergone lower limb amputation referred to MMC, we have therefore needed to initiate the use of an outcome measure to gather psychosocial information from this group of patients. The use of the Reintegration into Normal Living Index (Wood-Daughinee SL et al 1988) commenced in February 2011. This is sent out to the patient in advance of an MDT notes only review of the patient, 6 months after they abandon the use of their prosthesis or they are declared a non limb wearer following assessment.

The service will continue to monitor the use of these questionnaires within the patient's rehabilitation. TAPES and RNLI are currently being added to the Integrated Care Pathway.

Louise Tisdale, Clinical Specialist Physiotherapist, Maltings Mobility Centre, Wolverhampton.

References

Atkin K, Cole MJ, Cumming J and Donovan-Hall (2010) BACPAR Toolbox of Outcome measures.

Blundell R, Bow D, Donald J, Drury S and Hirst L (2008) Guidelines for the Prevention of Falls in Lower Limb Amputees.

College of Occupational Therapists (2011) Occupational Therapy with people who have had lower limb amputations; evidence based guidelines.
Gallagher, P., & MacLachlan, M. (2000). Development and psychometric evaluation of the trinity amputation and prosthesis experience scales (TAPES). Rehabilitation Psychology, 45(2), 130-154.

College of Occupational Therapists (2011) Occupational Therapy with people who have had lower limb amputations; evidence based guidelines.

Wood-Daughinee SL Opzoomer A et al (1988) Assessment of global function: The Reintegration to Normal Living Index. Arch Phys Med Rehabil. 69: 583-590.

Phantom Limb Pain Management in the Rehabilitation of Lower Limb Amputees

Introduction

Up to 80% of amputee patients report pain following amputation that affects their quality of life and hinders rehabilitation (Nikolajsen and Jensen, 2001; Ephraim et al., 2005). Phantom Phenomena are not a well defined concept (Jensen and Rasmussen, 1994; Hill, 1999). Descriptions of pain have been reported in the post amputation period, these being residual limb pain (RLP), phantom limb pain (PLP) and phantom limb sensation (PLS).
Nikolajsen and Jensen (2001) state that these elements can often coexist together and are not mutually exclusive; it has been considered pertinent to separate these terms for clarity.

- RLP – Also known as 'stump pain' describes localised pain in the residuum only (Hodges and Bender, 1994)
- PLP – is a painful sensation in the absent limb (Hill, 1999)
- PLS – refers to any non painful sensation in the absent limb

The manifestations of phantom limb phenomena are widely recognised in the literature (Wesolowski and Lema, 1993; Hill, 1999; Ephraim et al, 2005), however the underlying mechanisms remain a contentious issue raising doubt as to the most effective management approach (Halbert et al., 2002; Siddle, 2004).

Clinical Characteristics

The incidence of phantom limb pain varies in the literature from 9 to 88% (Hodges and Bender, 1994) but the majority of more recent studies report the incidence to be 50-83% (Hill, 1999; Nikolajsen and Jensen, 2001; Siddle, 2004), anecdotally most patients report PLP postoperatively.

PLP onset is usually rapid following surgery and frequency and intensity usually diminish over time (Nikolajsen et al, 2006). This study looked retrospectively at PLP characteristics and asked participants to remember their PLP experience, potentially introducing recall bias.

PLP includes symptoms such as cramping, burning, tingling and shooting pain. A cohort study (n = 914) conducted by Ephraim et al (2005) showed that at eight days post amputation the most common descriptors of pain were knifelike (55%), sticking (36%) and shooting (14%). PLP is typically intermittent, with a few patients reporting constant pain (Ephraim et al, 2005; Nikolajsen and Jensen, 2001).

In a multivariate analysis, amputees with two or more comorbid conditions were 2.7 times more likely than amputees with no comorbidities to rate the intensity of their PLP as moderate versus mild, after controlling for amputation-related and sociodemographic factors (Ephraim et al, 2005).

In the majority of studies concerning PLP, the patient group consists of elderly amputees with a primary diagnosis of peripheral vascular disease as well as other arteriopathic or age-related co-morbidities. This may lead to limitation in the generalisability of evidence to a younger cohort with fewer of these potentially confounding co-morbidities. There is no demographic description in the literature for patients not experiencing PLP.

Theoretical concepts of Phantom Limb Pain

Psychological Theory

Early theories postulated PLP represented an emotional response to the loss of a body part, (Kolb, 1954). Psychological theories have attributed chronic pain and PLP to personality disorders, masked depression, guilt, deference against loss and repressed hostility (Merskey and Boyd, 1978; Blumer and Heilbroon, 1982; Violon, 1982). The above accounts, however are more dated, and have used inadequate methodologies to substantiate their proposals, which in the authors experience is often the case when trying to theorise concepts. Melzack and Katz (1990) more recently found that people experiencing PLP are no more or less likely to demonstrate psychopathology than the population at large. Recent

literature appears more united in its proposal that although psychological factors may exacerbate PLP the origin of the pain remains organic (Stannard, 1993; Wesolowski and Lema, 1993; Hill, 1999, Siddle, 2004).

Peripheral and spinal theories

Peripheral theories assume that PLP originates at the nerves around the injury (Hill, 1999). Jensen and Rasmussen, (1994) put forward that multiple nerves are sectioned and begin regenerating post amputation. This may lead to a source of an abnormal afferent barrage. Furthermore Jensen and Rasmussen (1994) suggest the blood-nerve barrier is damaged post nerve section and foreign chemicals may affect their future growth and excitability.
The above mechanisms can be argued against for two main reasons firstly PLP often presents immediately following deafferentation and thus before neural regeneration has begun (Hodges and Bender, 1994). Secondly the literature reports cases of PLP in congenital aplasia, in which no nerve damage is present (Price, 2005).

Another peripheral theory works on the assumption that regenerating axons form a sensitive neuroma on the stump (Stannard, 1993). These neuromas continue to generate impulses, which activate central nervous system neurons, which are perceived by the patient as PLP (Hill, 1999; Siddle, 2004). PLP is reported more frequently by patient with observable stump pathology (Sherman, 1989).
Melzack (2002) puts forward that although peripheral and spinal processes are an important part of the pain theory, the data on PLP below the level of total spinal section (Melzack and Loeser, 1978; Wesolowski and Lema, 1993) indicate that more central theories need to be considered in understanding PLP.

Central Theory

Melzack (1990) proposed the concept of a neuromatrix to explain PLP involving a number of bodies in the cerebrum and brainstem. According to this theory, the neuromatrix is created through sensory experiences pre amputation, creating 'neurosignitures' or 'memories' (Melzack, 2002; Siddle, 2004). PLP is suggested to be the result of information concerning a body part, 'the neurosigniture' being processed into awareness in spite of a lack of sensory information (Hodges and Bender, 1994; Melzack, 2002). This occurs because the body – self neuromatrix (Melzack, 1990) contains in-built body schema which can produce output, even without afferent information (Hill, 1999; Melzack, 2002). Melzack (2002) further suggests that PLP may be the result of motor instructions to the affected body part (amputated limb), which are intensified due to the absence of feedback. However, as discussed above a number of authors have suggested the occurrence of stump pathology is significantly correlated to PLP (Jensen and Rasmussen, 1984; Sherman, 1989; Hill, 1999) and that sensory stimuli triggers PLP. This contradicts the concept of a 'neurosigniture' producing the output interpreted as PLP.

Similarly to psychological and peripheral theories, central theories are not able to substantiate the mechanisms behind PLP in their own right. However they each have something to contribute to this discussion of the management and treatment of PLP. This would suggest a multifactorial aetiology to PLP, with each of the above mechanisms contributing to a varying degree from case to case.

Treatment for PLP

Many treatments have been proposed for the treatment of PLP, and have varying presumed sites of action (Wesolowski and Lema, 1993), see table 1.

Pharmacological Interventions

Siddle (2004) stresses the need for ongoing pain assessment in order to ascertain the effectiveness of drugs used.

The rationale for the use of various pharmacologic agents lie in the multifactoral theorized origins of PLP as well as the awareness of the affective, cognitive and biological triggers of PLP (Alviar et al, 2009). See table 1. Many of the studies looking into the effectiveness of pharmacological agents specifically for PLP used small groups with no long term follow up (Sherman, 1994; Rhodes, 2001).

Antidepressants, particularly those from the TCA group, and anticonvulsants are frequently administered for the treatment of PLP (Flor et al, 1995). Onghena and Van Houdenhove (1992) completed a comprehensive meta-analysis of 39 controlled trials, which found TCA's to be valuable in addressing chronic pain, none of these studies looked into PLP specifically however. Double blinded trials are needed to confirm the use of TCA's in the treatment of PLP (Rhodes, 2001). Peripheral actions of the TCA's may also be of benefit for the patient. These are improvements in sleep, mood and anxiety (Williams and Deaton, 1997; Mersky and Boyd, 1978). Important as PLP suffers have frequently reported PLP worsens in times of stress and anxiety.
Jaeger and Maier (1992) completed a double-blind cross-over study of 21 amputees who received either intravenous

calcitonin or placebo. Pain scores were significantly reduced during infusion and 1 year follow up suggested a long term effect also. During the infusions however 57% had side effects that included nausea and vomiting, drowsiness, dizziness and headaches. Alviar et al (2009) reported encouraging results with the use of calcitonin in PLP but admit the mechanism of action is unknown. Calcitonin is not routinely used in the author's clinical setting.

Surgical Intervention

Various surgical techniques have been used to try to control PLP (table 1). All have inherent risks and often cause new problems and sensations as troublesome as the original PLP (Stannard, 1993; Wesolowski and Lema, 1993).

Non- Medical Interventions

Jensen and Rasmussen (1994) have stated that a multidisciplinary approach to PLP management and rehabilitation can provide amputees with the best chance of a pain free outcome. Various non medical modalities can be combined with medical treatments to address PLP (Table 1). Despite widespread use clear evidence of their effect is limited (Katz and Melzack, 1991; Halbert et al, 2002; Ezzo et al, 2000).

Transcutaneous electrical nerve stimulation (TENS) and more recently Graded Motor Imagery (GMI) are used in the writer's clinical setting and will be discussed in this section. Positive effects of TENS would suggest more peripheral mechanisms are responsible for the modulation of PLP. Conversely positive effects of GMI would suggest more central mechanisms are responsible.

TENS

Initially TENS was interpreted as being the answer to PLP; however the early promise of the successful case studies has not been reflected in the larger more rigorous studies (Mulvey et al, 2010).

Lundeberg (1985) used TENS applied to the stump, 24 amputees were randomised to active TENS or placebo. 75% of the TENS group reported a reduction in pain during treatment and 38% reported reduction in the placebo group. Finsen et al (1988) reported initial success in reducing PLP with TENS however the statistical difference was not maintained at follow up after one year.

Major problems with interpreting the evidence are, firstly that TENS can be applied to varying areas including the stump, the contralateral limb and even the ear (auricular) (Katz and Melzack, 1991). Secondly no adequate placebo TENS has been found in order to make comparisons.

Mulvey et al (2010) concluded that there was insufficient evidence from randomised controlled trials to judge whether TENS was effective in the management of PLP.

The author's clinical practice has demonstrated TENS to be an inexpensive, safe and easy to use analgesic technique that patients can apply themselves. However it does not prove effective for all patients at reducing PLP. As no negative effects of TENS have been documented in the literature it is used on an experimental basis in the ward setting by the author.

Graded Motor Imagery

GMI is a sequence of strategies including laterality restoration (being able to identify left and right limbs), motor imagery exercises and use of a mirror box (Noi, 2010). Limb laterality recognition is thought to activate pre motor cortices allowing a selective and graded therapy (Moseley et al, 2003). Loss of laterality recognition is known to occur in PLP (Moseley, 2004; Nico et al, 2004); this research looks only at upper limb amputees. In practice and in discussion with colleagues, it seems lower limb amputees have less loss of laterality recognition and this part of the sequence of exercises is often mastered quickly.

Moseley (2006) randomly allocated 51 patients with PLP or complex regional pain syndrome to graded motor imagery (consisting of the above sequence of exercises) or to physiotherapy and ongoing medical care. There was a significant (95% CI) decrease in pain between pre and post treatment, using a visual analogue scale in the GMI group and with improvements in function being reported also. Moseley (2006) concludes that although GMI reduced PLP the mechanism or mechanisms of the effect are not clear.

The technique is time intensive and requires a large amount of one-to-one time with the physiotherapist which is not always feasible on a busy ward based setting. It has also been observed that some patients do not have the patience to complete the exercises which require focus, understanding and concentration.

Conclusion

There are several theoretical concepts for the origins of PLP in the literature. What emerges from clinical practice and the evidence presented is that a combination of these concepts, rather than one concept alone, is probably responsible for the development of PLP. If so, there will be more than one target mechanism for the treatment of PLP and consequently, treatments given in clinical practice will be diverse. Where multiple treatments are given, ongoing PLP assessment by the MDT is crucial to ascertain the benefit of each intervention. The effectiveness of treatments in managing PLP has yet to be established with randomised controlled trials. Until this happens, debate will remain as to the best approach in the management of patients with PLP.

Elizabeth Geer, Specialist Vascular Physiotherapist

Presumed Site of Action	Non Invasive Interventions	Invasive Interventions
Peripheral	Medical Non – narcotic analgesics Anticonvulsants Local anaesthetics Guanethidine Non-Medical Electrical Stimulation Acupuncture TENS Massage Ultrasound Biofeedback	Neurectomy Neuromectomy Stump revision Rhizotomy Ganglionectomy Sympathectomy
Spinal Cord	Medical Narcotic analgesics Baclofen Lidocane Tricyclic antidepressants Calcitonin Anticonvulsants Non-medical Peripheral electrical stimulation	Dorsal root entry-zone lesion Dorsal column stimulation Chordotomy Epidural blockade
Brain (Central Theories)	Medical Narcotic analgesics Non- narcotic analgesics Tricyclic antidepressants Neuroleptics 'Placebo' Non-Medical Graded motor imagery Peripheral electrical stimulation 'Placebo' Psychotherapy Hypnosis Behavioural therapy	Brain stem stimulation Thalamic stimulation Brain stem lesions Thalamic lesions Parietal lobectomy Prefrontal lobectomy Cingulectomy

Table 1 – Reported treatments used for treating PLP and presumed site of action. Adapted from Rhodes (2001); Jenson and Rasmussen (1983) and Nikolajsen and Jensen, (2000)

References

Alviar, M. J. M., Dungcaz, M. and Hale, T (2009) Pharmacologic interventions for treating phantom limb pain (protocol). The Cochrane Collaboration. Published by John Wiley & Sons Ltd pp 1-13

Blumer, D. And Heilbronn, M. (1982) chronic pain as a variant of depressive disease: the pain prone disorder. J Nerv Mental Dis 170 pp 381-406

Ephraim, P. L., Wegener, S. T., MacKenzie, E. J., Dillingham, T. R. And Pezzin, L. E. (2005) Phantom pain, residual pain, and back pain in amputees: results of a national survey. Archives of Physical Medicine and Rehabilitation. 86 (10) pp 1910-1919.

Ezzo, J., Berman, B., Hadhazy, V. A., Jadad, A. R., Lao, L. and Singh, B. B. (2000) Is acupuncture effective for the treatment of chronic pain? Pain 86 pp 217-225

Finsen, V., Persen, L., Lovlien, M., Veslegaard, E. K., Simensen, M. and Gasvann, A. K. (1988) Transcutaneous electrical nerve stimulation after major amputation. Journal of Bone and Joint Surgery 70 (1) pp 109-112.

Flor, H., Elbert, T. And Knecht, S. (1995) Phantom-limb pain as a perceptual correlate of Cortical reorganisation following arm amputation. Nature 375 pp 482-4.

Halbert, J., Crotty, M. and Cameron, I. D. (2002) Evidence for the optimal management of acute and chronic phantom pain: a systematic review. Clinical Journal of pain 18 (2) pp 84-92.

Hill, A. (1999) Phantom Limb Pain: A Review of the Literature on Attributes and Potential Mechanisms. Journal of Pain and Symptom Management. 17 2 pp 125-141.

Hodges, C. and Bender, L. (1994) Phantom Pain: A Critical Review of the Proposed Mechanisms. British Journal of Occupational Therapy. 57 (6) pp 209-212.

Jaeger, H. and Maier, C. (1992) Calcitonin in phantom limb pain: a double- blind study. Pain. 48 pp 21-27.

Jensen, T. S. and Rasmussen, P. (1983) Phantom limb and stump pain in amputees during the first 6 months following limb amputation. Pain 17 pp 243-256.

Jensen, T. S. and Rasmussen, P. (1994) Phantom Pain and other phenomena after amputation. In: Wall, P. D, Melzack. R. Editors. Textbook of Pain. 3rd ed. London: Churchil Livingstone, pp 651-683.

Katz, J. and Melzack, R. (1991) Auricular transcutaneous electrical nerve stimulation (TENS) reduces phantom limb pain. Journal of Pain Symptom Management. 6 (2) pp 73-83.

Kolb, L. C. (1954) The painful phantom. Psychology, physiology and treatment. Illinois: Thomas pp 97-108

Lundeberg, T. (1985) Relief of pain from a phantom limb by peripheral stimulation. Journal of Neurology 232 (2) pp 79-82.

Melzack, R. (1990) Phantom limbs and the concept of a neuromatrix. Trends Neurosci 13 pp 88-92.

Melzack, R. (2002) Gate control theory: on the evolution of pain concepts. In: Gifford, L. Editors. Topical Issues in Pain 3 – Sympathetic nervous system and pain, pain management and clinical effectiveness. Kestrel: Churchill Livingstone. Pp 3-20.

Melzack, R. And Katz, J. (1990) Pain 'memories' in phantom limbs: review and clinical observations. Pain 43 pp 319-36.

Melzack, R. And Loeser, J. D. (1978) Phantom body pain in paraplegics: evidence for a central 'pattern generating mechanism' for pain. Pain 4 pp 195-210.

Merskey, H. And Boyd, D. (1978) Emotional adjustment and chronic pain. Pain. 5 pp 173-178

Moseley, G. L. (2004) Why do people with complex regional pain syndrome take longer to recognise their affected hand? Neurology 62 pp 2182-2186

Moseley, G. L. (2006) Graded motor imagery for pathological pain. Neurology 67 pp 1-6

Moseley, G. L., Schweinhardt, P., Wise, R. And Tracey, I. (2003). Virtual, imagined and mirror movements – a novel

approach to complex regional pain syndrome. Paper presented at the Europ Fed IASP Conference. Prague.

Mulvey, M. R., Bagnall, A. M., Johnson, M. I. And Marchant, P. R. (2010) Transcutaneous electrical nerve stimulation (TENS) for phantom pain and stump pain following amputation in adults. The Cochrane Collaboration. 5. Published by John Wiley & Sons Ltd: London. pp. 1-15

Nico, D., Daprati, E., Rigal, F., Parsons, L. and Siragu, A. (2004). Left and right hand recognition in upper limb amputees. Brain. 127 pp 120-132.

Nikolajsen, L., Finnerup, N. B., Kramp, S., Vimtrup, A., Keller, J. and Jensen, T. S. (2006) A Randomised Study of the Effects of Gabapentin on Postamputation Pain. Anesthesiology. 105 (5) pp 1008-1015.

Nikolajsen, L. and Jensen, T. S. (2000) Phantom Limb Pain. Current Review of Pain. 4 pp 166-170.

Nikolajsen, L. and Jensen, T. S. (2001) Phantom limb pain. British Journal of Anaesthesia 87 (1) pp 107-116.

Neurological Orthopaedic Institute (Noi) Graded Motor Imagery Programme. Available at: www.gradedmotorimagery.com. Last accessed: 10/08/10

Onghena, P. and Van Houdenhove, B. (1992) Antidepressant-induced analgesia in chronic non-malignant pain: a meta-analysis of 39 placebo controlled studies. Pain 49 pp 205-19.

Price, E. H. (2005) A critical review of congenital phantom limb cases and developmental theory for the basis of body image. Consciousness and Cognition. 15 (2) pp 310-322

Rhodes L. (2001) Phantom Limb Pain. In: Malawer, M. Editor. Musculoskeletal cancer surgery treatment of sarcomas and allied diseases. New York: Kluwer Academic Publishers. Pp 370-378

Sherman, R. A. (1989) Stump and phantom limb pain. Neurol Clin 7 pp 249-264.

Sherman, R. A. (1994) Phantom limb pain mechanism based management. Clin Podiatric Med Surg 11 pp 85-106

Siddle, L. (2004) The challenge and management of phantom limb pain after amputation. British Journal of Nursing. 13 (11) pp 664- 667

Stannard, C. F. (1993) Phantom Limb Pain. British Journal of Hospital Medicine. 50 (10) pp 583-587.

Uden, M and Waites, B. (2005) Pain management. In: Engstrom, B. and Van de Ven, C. Editors. Therapy for Amputees. 3rd Edition. London: Churchill Livinstone. pp 269-279.

Violon, A. (1982) The process of becoming a chronic pain patient. In Roy, R and Tunks, E. Editors. Psychosocial factors in rehabilitation. London: Williams and Wilkins pp 20 -35.

Wesolowski, J. A. and Lema, M. J. (1993) Phantom Limb Pain. Regional Anesthesia 18 pp 121-127.

Williams, A. M and Deaton, S. B. (1997) Phantom limp pain: elusive, yet real. Rehabilitation Nursing. 22 (2) pp 73-7.

Exploring the approach of physiotherapists in relation to current practice in the educative treatment of lower limb amputees with Phantom Limb Pain

Fiona Beckett[1], Simon Horne[1], Laura Tapp[1], Dr Maggie Donovan-Hall[1], Mary Jane Cole [2] . [1]Faculty of Health Sciences, University of Southampton, [2] Faculty of Health and Social Care Sciences, St George's, University of London

Introduction

Phantom Limb Pain (PLP) is experienced by many following amputation with **incidence rates vary from 60% to 85%** 1,2,3.
Psychological factors seem to affect the course and severity of pain 4. Recent studies indicate viewing the causes of PLP from a **bio-psychosocial perspective** 5.
Patients indicate there is an unmet need for information on PLP pre and post operatively 6. There is also **uncertainty amongst health professionals** providing information regarding PLP 7. Empowering patients to become active participants in learning facilitates long term well-being. There is a need for greater understanding concerning patient education about PLP across all healthcare disciplines.
Aim: This study aims to explore the educative treatment of PLP by physiotherapists.

Research questions

1. What is the reported current practice regarding information giving/education for patients undergoing amputation concerning PLP?
2. What do physiotherapists regard as the key aspects of education regarding PLP including management strategies in addition to factual information on the condition?

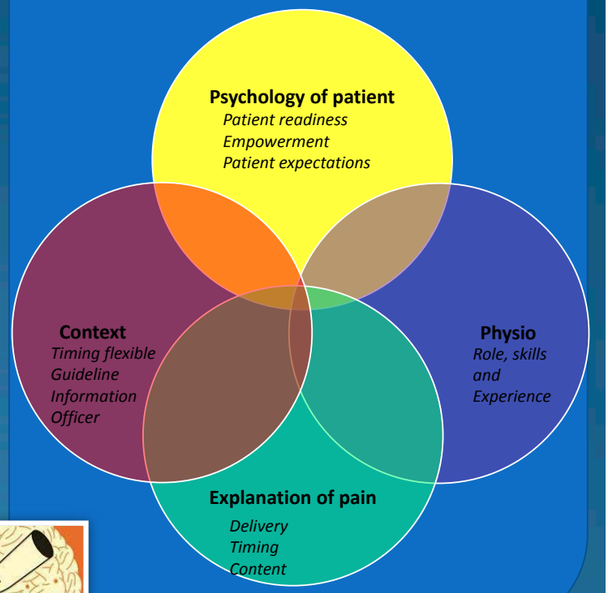
Method

To explore current practice, email semi-structured interviews were conducted with Physiotherapists working in the field of amputee and prosthetic rehabilitation as members of the British Association of Chartered Physiotherapists in Amputee Rehabilitation (BACPAR), with at least 1 years experience. Email semi-structured interviews are well established within clinical research 8,9. Interviews were conducted over 3 phases of emails with follow up questions to clarify and elaborate. Feasibility of email semi-structured interviews was also reviewed.

Contact email: PLPinfo@soton.ac.uk

Preliminary Results

Preliminary results indicate 4 categories:



Conclusion

Preliminary results indicate that:
1) Psychological status of the patient is integral to providing information.
2) The Physiotherapist role in education is complex and varies with the level of experience.
3) To understand PLP an explanation of pain should be given. Several elements affect the provision of such information.

References

1. EHDE DM, CZERNIECKI JM, SMITH DG & AL, E. 2000. Chronic phantom sensations, phantom pain, residual limb pain, and other regional pain after lower limb amputation. *Archives of Physical Medicine and Rehabilitation,* 81, 1039 -1044.
2. EHDE DM, JENSEN MP, ENGEL J, TURNER JA, HOFFMAN AJ & DD, C. 2003. Chronic pain secondary to disability: a review. *Clin J Pain,* 19, 3-17.
3. FLOR, H. 2002. Phantom-limb pain: characteristics, causes, and treatment. *Lancet Neurol.,* 1, 182 - 189.
4. HANLEY MA, JENSEN MP, EHDE DM, HOFFMAN AJ, PATTERSON DR & ROBINSON LR 2004. Psychosocial predictors of long-term adjustment to lower-limb amputation and phantom limb pain. *Disability and Rehabilitation,* 26, 882-893.
5. HUNT N & MCHALE S 2007. A Practical Guide to the E-Mail Interview. *Qual Health Res,* 17, 1415.
6. JENSEN TS, KREBS B, NIELSEN J & ET AL 1983. Phantom limb pain, phantom pain and stump pain in amputees during the first 6 months following limb amputation. *Pain,* 17, 243-256.
7. MEHO LI 2006. E-Mail Interviewing in Qualitative Research: A Methodological Discussion. *Journal of the American society for Information Science and Technology,* 57, 1284-1295.
8. MORTIMER CM, MACDONALD RJM, MARTIN DJ, MCMILLAN IR, RAVEY J & STEEDMAN WM 2004. A focus group study of health professionals' views on phantom sensation, phantom pain and the need for patient information. *Patient Education and Counselling,* 54, 221-226.
9. MORTIMER CM, STEEDMAN WM, MCMILLAN IR, MARTIN DJ & RAVEY J 2002. Patient information on phantom limb pain: a focus group study of patient experiences, perceptions and opinions. *Health Education Research,* 17, 291-304.

A Review of Primary Prosthetic Assessments at Portsmouth's Regional Prosthetic Service: An Audit (2009)

Authors: C Ostler [1], A Gilbertson [2] , A. Hatfield [3], A Cole [4]

1 – Amputee Specialist Physiotherapist, 2- Senior Prosthetist, 3 – Rehabilitation Consultant, 4- Nurse Specialist. Prosthetic Regional Rehab Service, DSC, Portsmouth

Background and Aim

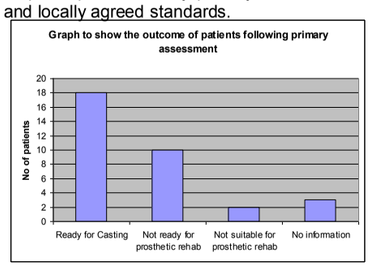
Portsmouth's Prosthetic service has 1362 registered patients. When these patients enter the service as a new amputee they undertake a primary assessment. The BSRM recommend that this is an MDT assessment that takes place at an appropriate point in the patients post amputation journey. Pre- 2009 Portsmouth had a 4 month wait for a primary assessment and an attendance rate of only 80%. An Audit was undertaken in 2009 to assess whether Portsmouth's prosthetic service offered its amputee patients timely primary assessment in line with national and locally agreed standards.

Method

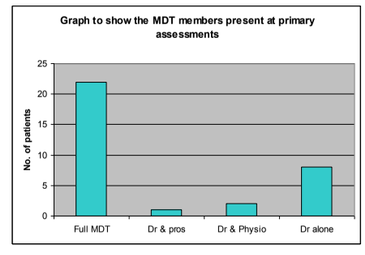
Between January and March 2009 all primary clinic appointments were audited by the MDT. Data were collected using an audit tool. The tool was produced based upon national standards (BSRM 2003) and a consensus by the MDT as to what was viewed as a comprehensive service. The audit tool was completed after each primary clinic appointment by the consultant and then filed in a secure cabinet. Data was then analysed using excel at the end of the three month period.

Results

The results showed that the service was not adhering to the national and local audit standards. Areas of particular concern were around the lack of nursing care available for wound management and no supplementary written information was provided. The audit also highlighted that only 67% of patients had a full MDT assessment. Counselling was only discussed with 48% of patients and only 46% of patients attending their primary appointment where actually ready to begin the prosthetic rehabilitation process suggesting that the assessment was not done at the correct point in the patients post amputation pathway.



Key Audit Standards	Results
1. 100% of patients will have wound care provided by a nurse.	Achieved 0%
2. Counseling will be offered /discussed with 100% of patients	Achieved 48%
3. 100% of patients who are ready to be cast will have a cast taken on the same day	Achieved 85%
4. 100% of patients will be provided with written information (BSRM 2003)	Achieved 0%
5. Expectations and goals will be discussed with 100% of patients	Achieved 97%
6. 100% of appropriate patients will have an MDT assessment (BSRM 2003)	Achieved 67%



Conclusions

• A recent vacancy in the nurse role has led to issues being raised around wound care being provided by other members of the MDT. This has led to appointments running late and presents a significant risk to the many patients attending their primary assessments with unhealed wounds.

•Due to the current appointment structure MDT members are often unable to attend primary assessments as their clinics are already full. This poor co-ordination in care has lead to an inconsistency in assessments and the service is unable to provide MDT assessments on a regular basis.

•The correct timing of the primary assessment in the patients journey does not seem to be consistently achieved with only 46% of patients ready to begin their prosthetic rehab. This can be viewed alongside a 20% DNA rate suggesting patients may not attend if they are not ready for the appointment.

•Despite the development of a new counselling service this was not offered to all patients with many clinicians stating that the patients 'appeared' to be well adjusted. Adjustment following amputation is complex and it may not be possible to assess this fully in one appointment and patients should be offered this service so they can access it at their discretion.

Action Plan

Written Information will be developed covering key areas discussed in the primary assessment as recommended by the BSRM

Counselling should be discussed with all patients and an informal session with the counsellor offered. Training for all staff on adjustment following amputation will be provided

All referrals for primary assessments will be triaged by the MDT to establish if the patient is at the correct point in their journey to begin prosthetic rehabilitation

The referral form will be updated to collect all information required for triage

A specialist nurse will be recruited to the centre to provide expert wound care

The appointment structure for primary assessments will be adjusted to include all MDT members allowing full MDT assessments as recommended by the BSRM

A Review of Primary Prosthetic Assessments at Portsmouth's Regional Prosthetic Service: A Re-Audit (2011)

Authors: C Ostler [1], A Gilbertson [2] , A. Hatfield [3], A Cole [4]

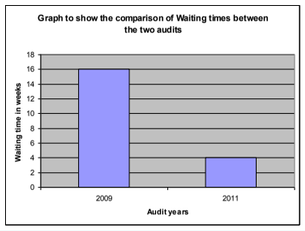
1 – Amputee Specialist Physiotherapist, 2- Senior Prosthetist, 3 – Rehabilitation Consultant, 4- Nurse Specialist. Prosthetic Regional Rehab Service, DSC, Portsmouth

Background and Aim

Following the implementation of the 2009 audit action plan a re-audit was carried out in 2011 to re-assess the service and the effectiveness of the action plan.

Method

Between January and March 2011 all primary clinic appointments were audited by the MDT. Data were collected using the original audit tool. Data collection, analysis and was in line with the 2009 audit method. Alongside this audit a patient experience survey was carried out to gain the patients perspective on these service changes.



Results

The audit results below show that the department and MDT have made significant improvements to the assessment of primary amputee patients with many of the key audit standards showing improvements. A nurse was recruited who was able to provide wound care, education was provided which improved awareness of the counselling service, a package of information was produced to back up verbal consultations and the MDT appointment structures were re-organised to allow more patients to have a full MDT assessment. This re-structure also led to the development of nurse led MDT clinics.

Other key outcomes were that by implementing a triage process to establish whether patients were at the right point in their pathway to attend, the DNA rate reduced from 20% in 2009 down to 5% in 2011. By appointing the referrals at the correct time the waiting time also reduced from 4 months in 2009 to 4 weeks in 2011.

In 2009 46% of patients were deemed ready to cast at their primary appointment. By triaging referrals and appointing at the correct point in the pathway this figure increased to 81%.

Key Audit Standards		2009 Results	2011 Results
1. 100% of patients will have wound care provided by a nurse.	Achieved 0%	87.5%	
2. Counseling will be offered /discussed with 100% of patients	Achieved 48%	100%	
3. 100% of patients who are ready to be cast will have a cast taken on the same day		Achieved 85%	88%
4. 100% of patients will be provided with written information (BSRM 2003)		Achieved 0%	90%
5. Expectations and goals will be discussed with 100% of patients		Achieved 97%	100%
6. 100% of appropriate patients will have an MDT assessment (BSRM 2003)		Achieved 67%	81%

PATIENT EXPERIENCE SURVEY RESULTS

18 patients completed the survey between January and march 2011 after they had attended their primary MDT consultation.

KEY RESULTS

•94% of patients reported their expectations were met during their consultation

•100% of the patients felt listened too and felt that their important questions had been answered.

•94% of patients were very satisfied with the information they received during the consultation.

•100% rated their consultation as excellent or good.

•100% of patients felt the consultation was about the right length of time

PATIENT COMMENTS

"Exemplary reception from this MD. All made most welcome, positive attitudes and professional courtesy"

"A very informative session with ladies who really listened and understood our needs"

Conclusions

• The re-structuring of the MDT clinics improved MDT assessment but as a number of disciplines with the team are staffed only by one individual it was not possible to achieved 100% due to sickness and annual leave. It was noted however that written reports were provided on these occasions.

•The triage process has allowed us to identify less complex patients who may be more suitable to be seen by a nurse led MDT rather than the historical consultant led team. This utilization of nursing clinics has led to a more cost effective way of delivering the service.

•Triage was done virtually using paper referrals. The referral form was updated and therapists across the region were encouraged to make the referrals instead of the medical staff. This resulted in the number of referral forms being completed with the correct rehab information needed to triage rising from 67% in 2009 to 90% in 2011. This has been vital in the MDT decision making process.

•The Triage process as a whole has contributed to many of the improvements i.e. reduced waiting times, reduced DNA rates and increased readiness to cast. The main reason for not being able to cast the remaining 19% of patients was the presence of oedema in the residual limb. This is difficult to assess at triage but is usually managed in the referring hospitals using stump shrinker socks. An action point from this re-audit is around education and provision of shrinker socks at the correct point in the patients pathway. This needs to be implemented across the region.

Therapeutic Management of the Acute Traumatic Amputee

17th - 18th May 2012

Education Centre, Queen Elizabeth Hospital Birmingham

A course aimed at all Therapists Involved in the

Acute Management of Traumatic Amputees (Civilian and/or Military)

- **Mechanism of Injury**
- **Surgical and Wound Management**
- **Early Rehabilitation on Critical Care**
- **Role of the Therapist**
- **Assessment and Treatment**
- **Pain Management**
- **Psychological Aspects**
- **Goal Setting and Outcome Measures**

Featuring Internationally Recognised Speakers

Course fees:

2 Day Early Bird **£80** (until 29/2/2012)

2 Day **£95**

Contact: kim.matthews@uhb.nhs.uk Tel: 0121 371 4918

Delivering the best in care

Queen Elizabeth Hospital Birmingham NHS
Part of University Hospitals Birmingham NHS Foundation Trust

Trauma Care

University Hospitals Birmingham NHS
NHS Foundation Trust

Use of the Gymnastic Ball for Rehabilitation with Amputees

Remember that dusty, deflated gym ball in the back of the cupboard?
Then come and see why you should be dusting and inflating with Janice Champion M.C.S.P.

D. S.C. Plymouth
from 10.00 to 16.30, 22nd November 2012

BACPAR Members £35
Non BACPAR Members £45

If interested please contact Jain Ord 01209 881630 or Helen Jones 01209 881647

Presented by BACPAR South West Region

Collaborative working between Prosthetics, Vascular Surgery and Diabetic Foot Teams at Kings College Hospital

In June 2011 Kings Health Partners held their annual Diabetic Foot Master Class study day. Professor Mike Edmonds (Prof. in Diabetology), Maureen Bates (Podiatry manager) and Liz Pendry (senior podiatrist) gave a comprehensive overview of the neuropathic foot and infection, the management of charcot's osteoarthropathy and the management of the renal foot. Dr Joan Hester then presented an overview of pain management. A topic she did very well to condense into a 30 min lecture and one we all wanted to hear and learn more about.

Mr Hisham Rashid (vascular surgeon), Dr Dean Huang (radiologist) and Mr Venu Kavarthapu (orthopaedic surgeon) spoke about ultra distal bypasses and hybrid bypass surgery, interventional radiology and orthopaedic surgery.

For those of you who have not attended one of these master class days, it is usually attended by podiatrists from all over the country, some orthotists, a few therapists and a small number of nurses. Due to the mix of professions and skill level, an overview is usually given in the morning, with the afternoon lectures being more specialist or controversial!

The afternoon live debate title was 'This house believes that amputation should be readily undertaken in the treatment of the diabetic foot.' The main panel consisted of Dr Asim Niaz (Consultant in Rehabilitation Medicine), Mr Rashid, Mr Kavarthapu and Professor Edmonds. An AHP side panel consisted of Maureen Bates, myself, Alan McDougal (senior prosthetist) and Christian Pankhurst (senior Orthotist).

The main panel members stated their individual opinion on the topic and then questions were taken from the floor and discussed.

The main themes discussed within the debate were :

1. Amputation should be timely and performed by a surgeon who routinely performs amputation, who understands the long term implications that surgical techniques have on prosthetic fit, component choice and long term functional outcome.

2. Mr Rashid stated that he believes that amputations are often carried out unnecessarily. He also stated that if an amputation is required, it should wherever possible be trans tibial. Some of these patients will benefit from bypassing prior to the amputation to ensure fast healing times.

3. Patients should be made aware that amputation might be a treatment option for them. They should be referred to their local prosthetics centre for a pre prosthetic assessment and opinion and the chance to meet other amputees. Many of the audience expressed concern that patients have trans femoral amputation following multiple toe amputations and 'nibbling'; while being non weight bearing, becoming increasingly dependent on carers, loosing range of movement and musculature weakness. They voiced their feelings that in these instances, a trans tibial amputation could have been performed earlier and function regained more easily.

At Kings College Hospital, Mr Rashid performs hybrid revascularisation and it is this work that forms part of their ethos to prevent major amputation. They perform the hybrids in conjunction with foot debridement and where necessary, skin grafting. So, what is a hybrid revascularisation ? Mr Rashid's definition is a planned combined angioplasty and distal bypass. The rational is to reduce the length of the graft, have fewer joints crossed and a better outcome.

Classification of Hybrids :

- Hybrid-I: inflow angioplasty + distal bypass
- Hybrid-II: distal bypass + outflow angioplasty
- Hybrid-III: angioplasty+ distal bypass+ angioplasty

Mr Rashid and Mr Zayed (vascular surgeon at Guys and St Thomas' Foundation Trust) and their teams analysed the 1 year outcome data of hybrids and found a mortality rate of 4 % (2 patients), a limb salvage rate of 96 % (48/50 legs)

and an amputation rate of 4 % (2/50 legs). 65 % of patients who underwent ultra distal bypasses at Kings Healthcare Partners were diabetic, 30% had chronic renal failure, the one-year major amputation rate is 3.4% and the one year mortality rate is 12.2 %. (H Slim et al, EJVES, 2011,Jul;42(1):83-8). It has also been reported that hospitals with large vascular units have been associated with reduced amputation and mortality rates after lower limb vascular surgery. Awopetu el al, Br J Surg. 2010 Jun;97(6):797-803

Prof Edmonds (Diabetologist) and Mr Rashid carryout a weekly joint vascular and diabetic ward round. This is also attended by the vascular nurse specialist, microbiologist, podiatrist, vascular scientist and always, a variety of students. At the study day, they invited us to join them on the ward round. SO…… for the last 6 months, either myself or our Band 6 physio (Jodie Georgiou) have attended this ward round, making it even bigger. We see a range of patients but what we are able to bring to the ward round is :

1. Advise re current mobility status and walking aids; liaising with ward physios

2. Advise re physiotherapy referrals following discharge, including to our orthotics department.

3. Advise re if a patients long term mobility and function may be better as an amputee and provide appropriate verbal and written information.

What we have learnt from attending the joint Vascular / Diabetic ward round is the clinical decision making process leading to further vascular interventions and surgery (including by passes, debridement, minor amputations).

When attending our usual weekly amputee rehab ward round, we are not privy to any of these clinical decision processes and in the past have often felt that a major amputation should have been performed earlier or at least discussed with the patient. Attending the vascular / diabetic ward round has changed our perceptions of the surgical teams' management of these patients. The feedback from Mr Rashid is that he whole heartedly welcomes our attendance, which gives a wider perspective to the team and patients' management.

Since joining the ward round, Mr Rashid has visited us at the prosthetics centre and presented his work on hybrid revascularisation and in the coming months, our Consultant in Rehabilitation Medicine (Dr Asim Niaz) will also be joining the very expanding joint vascular & diabetic ward round.

This is exciting collaborative working which helps provide patients with informed choice regarding their management, amputations which are performed timely and at an appropriate level but giving them a greater chance of saving their foot in the first instance.

Amy Jones - Clinical Specialist Prosthetic Physiotherapist

SPARG

The next SPARG meeting is to be held at the National Centre for Prosthetics & Orthotics on Thursday 26th April 2012. There will be a business meeting in the morning, followed by a study afternoon, looking at revised Intermittent Claudication Guidelines, OT Moving and Handling Guidelines, BACPAR Conference feedback, Benchmarking SPARG data and Outcome Measurment for young active amputees.

The SPARG website is now up and running – log in and register with your Athens password on http://www.knowledge.scot.nhs.uk/sparg.aspx

Documents / Guidelines for sale

• Annual report - Electronic copy available	
• Clinical Guidelines for the Physiotherapy Management of Intermittent Claudication (revised 2012)	£20
• PPAM aid Guidelines	£15
• Prosthetic Knee Guide (2 left!)	£15

For further details on any of the above contact Louise Whitehead (SPARG rep for BACPAR) on 01382 660111 ext 36149 or lwhitehead@nhs.net

The CSP Research Priorities Project – What is it and What Does it Mean for BACPAR Members?

BACPAR, alongside other professional networks, has been involved in the CSP Research Priorities Project. The aim of this article is to tell you about the project and outline the aims and processes involved, summarise the amputee priorities that were identified within the project, discuss the work that BACPAR has carried out so far, and finally, discuss what that member can get involved in addressing the priorities or research activities in general.

Background: a summary of the Research Priorities Project

The Research Priorities Project started in 2010. The key aim of the project has been to strategically direct and maximise opportunities to develop the evidence base for physiotherapy practice.

Additional project aims were to:

- Identify the areas of practice that appear to have the a shortage of evidence and develop the evidence base within these areas

- Identify and prioritise research topics using criteria which ensure the inclusion of patients' and service users' experiences as well as government priorities

- Influence the research funders and organisations who undertake evidence reviews/guideline development, government priorities and set national research priority exercises

- Inform the CSP Charitable Trust's funding i.e. awards are influenced by government and/ or CSP priorities. See the CSP website (Charitable Trust) for further information http://www.csp.org.uk/search/csp/Charitable%20Trust%20funding

- Steer CSP members in selecting research topics that are aligned to the identified priorities. For example, this may involve members carrying out postgraduate research projects or novice researchers

- Map priorities to government priorities, appropriate funding bodies and organisations undertaking evidence reviews, and to disseminate priorities to relevant organisations

- Facilitate research collaborations in areas of high priority and to maximise the profession's research expertise

- Maximise the profession's research expertise through collaborative working and to facilitate multi-disciplinary and multi-sector collaborations

Priorities were identified in 2011 by four expert panels. Panel members consisted of service users, commissioners, researchers, clinicians, and managers. The panels were:

1. Musculoskeletal
2. Neurology
3. Cardio-respiratory and medical rehabilitation (this included amputee rehabilitation)
4. Mental and physical health and wellbeing

Each panel encompassed all areas of clinical interest across the profession, such as paediatrics, older people, women's health, acupuncture, aquatic therapy. Panel members in relation to amputee rehabilitation included several physiotherapists who were in clinical or managerial positions (including BACPAR and SPARG representation), a prosthetist, a university based researcher and a service user.

To guide prioritisation of topics the following criteria was used:

- Does the topic address a significant need or gap in the evidence for physiotherapy practice and/or service delivery?

- Potential impact of the research for quality of care and experience for patients, their carers, service users and members of the public

- Potential impact of the research for physiotherapy practice

- Potential impact of the research for managers, service providers and commissioner/purchasers and relevance to government policy and priorities

Full details about the project including the methodology used to identify priorities can be found on the CSP website. http://www.csp.org.uk/professional-union/research/priorities/csp-research-priorities-project-2010
The priorities were published on the website in 2011. Currently the CSP's focus has shifted to facilitating research, analysing and developing priority topic areas and targeting individual funders.

Amputee priorities

It was interesting to find that a total of 11 amputee related topics were submitted. As previously stated, amputee related topics were reviewed within the 'Cardiorespiratory and medical rehabilitation' panel. Out of the 30 topics that were prioritised in this panel, six topics were relevant to amputee rehabilitation. Out of these six topics, one topic was 4th in the overall rating in the listed priorities, which related to 'Long term benefits and cost effectiveness of different models of physiotherapy intervention for new lower limb amputees'.
In addition to this, 'What are the main modalities of treatment for patients with phantom pain after amputation in the UK'? was rated as the 13th priority in the list. The other four topics reflected a range of themes, but mainly concerned the 'effectiveness of physiotherapy management'.

Having identified research priorities with amputee rehabilitation, what now? How can BACPAR members become involved in some way? What can BACPAR do to support members with these priorities and/ or research activities in general?

What now?

A BACPAR working group met during the Conference November 2011 to consider potential actions.

With respect to the first amputee priority ' 'Long term benefits and cost effectiveness of different models of physiotherapy intervention for new lower limb amputees', it was agreed that before any judgment could be made regarding the clinical effectiveness of the different models of rehabilitation, we needed to identify the current models used in rehabilitation. Therefore, an initial suggestion was to carry out a qualitative study to identify current models of rehabilitation. This could involve carrying out focus groups or interviews with clinicians to explore the different models of rehabilitation being used or planned (potentially via reorganisational exercises in some trusts). Descriptors of the models of rehabilitation could be developed from the initial interviews or focus groups. Following this stage of the research, a short questionnaire could be developed that describes the different rehabilitation models (patient journey) and this could be administered to the BACPAR and SPARG membership to identify the different models that clinicians are using. It was thought that initial qualitative work could be carried out with MSc students and members working in academic settings could potentially supervise these kinds of projects. (Informative work on models of rehabilitation has been done via SPARG).

How can members get involved with the priorities and/ or research activities in general?

BACPAR has an audit and research database, intended to be a repository of past, present and proposed research related projects. There is no evidence of priority related projects underway or planned.

BACPAR appreciates that some members engage in research, be it as part of an MSc project or in collaboration with clinical colleagues for example. However, it is also recognised that there are currently limited resources within the membership to engage in research projects on a larger scale, despite recent feedback from members expressing willingness to be involved in some way.

Pursuing research as part of an MSc or PhD is a rewarding activity, professionally and personally, and undoubtedly challenging. Challenges include identifying a relevant topic or question to research and then acquiring funding to support a project. The topics identified via the CSP project provide scope for a range of related research questions. Although BACPAR can contribute in a modest way towards the funding of research via bursaries, the CSP has the potential for steering members towards appropriate greater funding sources.

Further suggestions include:

- Related topics that sit within the 'umbrella' of a research priority may be suitable for an MSc. For example, a small group of students completing their pre-registration MSc in Physiotherapy at the University of Southampton recently carried out a project exploring different approaches physiotherapists use in education lower limb amputee patients about Phantom Limb Pain

- Consider collaborating with team colleagues, and/ or across different trusts and organisations e.g. with HEIs (Higher Education Institutions).The recent work done on the transtibial amputee gait deviations (Mazari et al 2010) and the early walking aid (Barnett et al, 2009) are examples of clinical and academic collaboration

- A future University of Bradford PGCert Amputee rehabilitation cohort could select a related topic as part of a guideline development, for example pain management

- Literature reviews, journal critiques and discussion via Journal Clubs or iCSP can focus on a priorities related research question

- Use local data and resources to support a model of rehabilitation such as case studies, outcomes, patient questionnaire or focus groups of local users

- Find out if hospital research and development departments offer schemes to support you develop your research interests

- Use local or regional research networks eg AHPRN (Allied Health Professions Network (http://prs.csp.org.uk/sites/allied-health-professions-research-network), your local Higher Education Institution (University) to encourage collaboration and source expert advice regards application for funding

- Use CSP resources – see http://www.csp.org.uk/search/csp/Research

- Keep BACPAR informed about your progress – get your project onto the BACPAR research and audit database

- Write and present your research ideas, pilot studies, and findings of course via the BACPAR journal, study days and conferences

- Share you work with CSP who will disseminate it via the website and newsletters. Email research.proirities@csp.org.uk

This article has provided a brief outline of the CSP Research Priorities Project and discussed the key priorities related to amputee rehabilitation. We have presented initial ideas regarding possible plans on how to address these priorities and provided suggestions for increasing research activity within the area of amputee rehabilitation. However, it is your views as members and clinicians working in amputee rehabilitation that are important. We welcome these and look forward to hearing your ideas for potential research projects and developments. These can be discussed on the CSP iCSP amputee rehabilitation network or emailed to Alex Weden, BACPAR Honorary Research Officer at alexanderweden@hotmail.com

Mary Jane Cole - Vice chair BACPAR & Dr Maggie Donovan-Hall - MPhil/PhD programme Lead

References:

CSP Research Priorities project. http://www.csp.org.uk/professional-union/research/priorities/csp-research-priorities-project-2010
AHPRN http://prs.csp.org.uk/sites/allied-health-professions-research-network

Mazari, F.A.K., Mockford, K., Barnett, C., Khan, J. A., Brown, B., Smith, L., Polman, R.J. C., Hancock, A., Vanicek, N.K., and Chetter, I.C. 2010. Hull early walking aid for rehabilitation of transtibial amputees – randomised controlled trial (HEART). Journal of Vascular Surgery. DOI 10.1016/j.jvs.2010.07.006

Barnett, C., Vanicek, N., Polman, R., Hancock, A., Brown, B., Smith, L., and Chetter I. 2009. Kinematic gait adaptations in unilateral transtibial amputees during rehabilitation. Prosthetics and Orthotics International, 33, 135-147

The Development of a Self-Rating Tool towards the evaluation of Competency in Amputee Rehabilitation

Cole, M.J. and Bithell, C.
School of Rehabilitation Sciences, Faculty of Health and Social Care Sciences, St George's, University of London/ Kingston University

Introduction

Physiotherapists are expected to provide up to date healthcare, practising safely, effectively and competently at all times (DH 1998).

Competency has been described as 'the possession of necessary skills and knowledge, attitudes and understanding required to perform to a satisfactory standards' (Day 2000) or an ability 'to get the job done'.

A self-rating competency tool has been developed to support an individual's ability to identify relevant learning needs towards CPD in order 'to get the job done'.

Purpose and background

Clinicians working in amputee rehabilitation in the United Kingdom sought support to gain **knowledge** and **skills** in the speciality. Their managers wanted feedback that their staff were competent to provide an effective service.

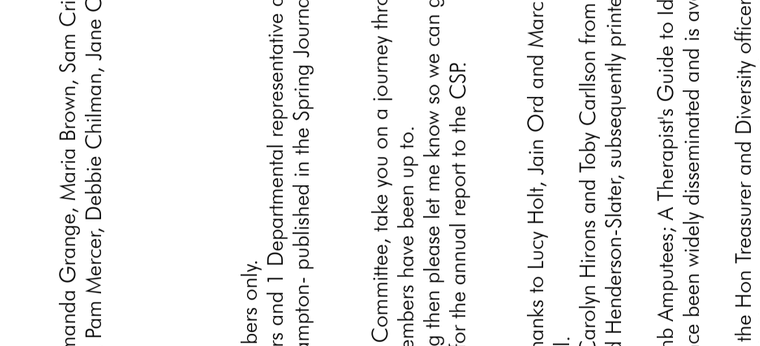
This prompted the design and pilot of the self-rating tool to help structure support and contribute towards an evaluation of competency.

Method

The pilot tool consisted of a 2-page form with 37 attributes reflecting areas of **knowledge** and **skills** relevant to physiotherapy and amputee rehabilitation and related to practice guidelines (Broomhead 2003; 2006). The attributes were set against a scale of 1 (low) to 5 (high).

Prior to support 14 clinicians (with varying experience in the speciality) were asked to rate themselves against the criteria.

Support was planned and provided. Each clinician then completed the form a second time to measure their perceived levels of **knowledge** and **skills**. Changes in ratings were noted.



Findings

The form discriminated between areas and levels of knowledge and skills.

Following support there was a change in scores, indicating that knowledge and skills had increased.

The physiotherapists were asked about the usefulness of the tool.

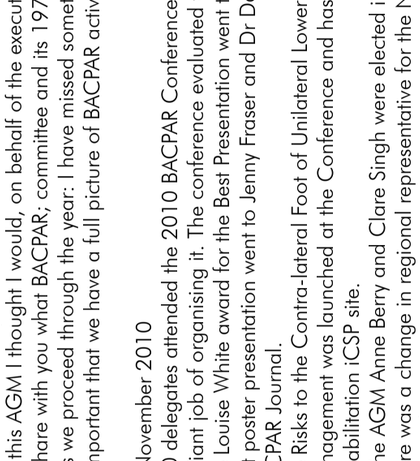
"The form focused my mind on what and where I was lacking" (Band 7 physiotherapist)

"It pin-pointed areas that needed attention. It made me sit down and critically evaluate my existing skills" (Band 6 physiotherapist)

"It has been especially useful to see how I've grown and learned" (Band 7 physiotherapist)

(Band 6 physiotherapist – specialist. Band 7 physiotherapist – highly specialist)

Example of revised self rating tool (page 1)


Amputee Rehabilitation

At this point in time rate your knowledge and understanding of:

	weak	strong
1. The causes of amputation	1 2 3 4 5 6 7 8 9 10	
2. The principles of amputation e.g. investigations, levels, complications	1 2 3 4 5 6 7 8 9 10	
3. The psycho-social aspects of amputation	1 2 3 4 5 6 7 8 9 10	
4. The pre-operative management of the lower limb amputee e.g. assessment	1 2 3 4 5 6 7 8 9 10	
5. The early post-operative management of the lower limb amputee e.g. assessment, oedema control, wound healing, prevention of infection, exercise therapy	1 2 3 4 5 6 7 8 9 10	
6. Causes of pain, residual limb and phantom	1 2 3 4 5 6 7 8 9 10	
7. The referral procedure for the limb fitting centre/DSC	1 2 3 4 5 6 7 8 9 10	
8. The pre-prosthetic rehabilitation stage e.g. early walking aids, prosthetic prescription	1 2 3 4 5 6 7 8 9 10	
9. The prosthetic rehabilitation of the lower limb amputee e.g. prosthesis, gait analysis	1 2 3 4 5 6 7 8 9 10	
10. The role within the overall management of the amputee of the:		
Surgeon	1 2 3 4 5 6 7 8 9 10	
Rehabilitation Consultant	1 2 3 4 5 6 7 8 9 10	
Nurse	1 2 3 4 5 6 7 8 9 10	
Physiotherapist	1 2 3 4 5 6 7 8 9 10	
Prosthetist	1 2 3 4 5 6 7 8 9 10	
Clinical Psychologist	1 2 3 4 5 6 7 8 9 10	
Occupational Therapist	1 2 3 4 5 6 7 8 9 10	
Social Worker	1 2 3 4 5 6 7 8 9 10	
Dietician	1 2 3 4 5 6 7 8 9 10	
11. Post-discharge management e.g. onward referral, review	1 2 3 4 5 6 7 8 9 10	
12. Outcome measures (in relation to amputee rehabilitation)	1 2 3 4 5 6 7 8 9 10	

Discussion

- The form was easy to use and refer to, prompting reflection and discussion
- It demonstrated that change had taken place. By comparing ratings it provided feedback on where development had occurred and where further learning was required
- The process was valued by clinicians

The tool continues to develop . . .

- The form now has 45 attributes; the rating scale has changed to 1-10
- It is used across the UK to support the development of students and physiotherapists in amputee rehabilitation, integrated into supervision and appraisal frameworks
- In one UK trust it has been adapted to reflect learning attributes in other physiotherapy specialist areas and those of Occupational Therapists

Evaluation continues:

''It made me reflect on how to achieve my learning objectives'' (Student)

''Particularly useful at half way appraisal (of students and staff) to check learning objectives are being achieved'' (Band 7 physiotherapist)

Conclusion

This tool facilitates the CPD process.

It reflects change in an individual's professional development, competency and ability to 'get the job done'.

It can be adapted for wider application.

It contributes to the provision of effective competent practice to patients.

Recommendations

There are limitations since self-rating scales may lack reliability (Cross et al 2001) and should be used in conjunction with other measures of competency.

Attributes should represent the specialist area with reference to up to date guidelines.

Acknowledgements

The physiotherapists participating in the pilot.

Kings College Hospital NHS Trust.

Colleagues and members of BACPAR (British Association of Chartered Physiotherapists in Amputee Rehabilitation) for their continuing feedback.

Kingston University and St George's University of London for supporting attendance WCPT 2011.

Tom Collins, Clinical Scientist, Wandsworth Community Services, for poster design advice

Presented at: International Society of Prosthetics & Orthotics World Congress Vancouver July 2007 (platform); World Congress Physical Therapy, Amsterdam June 2011

Contact details

Mary Jane Cole
m.cole@sgul.kingston.ac.uk

References

Cross, V., Hicks, C and F. Barwell. 2001. Comparing the importance of clinical competence criteria across specialities. *Physiotherapy*. 87. (7): 351-367.
Day, M. 2000. Putting vocational training into practice. Cited in Alsop, A. *Continuing professional development. A guide for therapists.* Oxford: Blackwell Science Ltd.
Department of Health. 1998. *A first class service – quality in the new NHS.* Leeds: Department of Health.

In December BACPAR were contacted by a then AACP tutor, Jennie Longbottom, re the value of an Acupuncture course for PLP management and tissue healing. This course subsequently was held in Shrewsbury, hosted by Ursula Crosby in September 2011 and was well attended by delegates from all over the country.

January 2011
The Oxford region (with its 10 members) held a study afternoon.
The West Midlands held an Introductory Study day.
I attended the first Professional Network Chairs Forum at the CSP; previously I was attending the CIGLC meeting as the CIGLC officer for BACPAR to discuss and start the process of the change from CIOGs to Professional Networks.
We received, second hand, copies of the Guidance on National Commissioning of Specialised Services for people of all ages with limb loss and The Cost of Meningitis document (from the Meningitis Research Foundation). This gave BACPAR the opportunity to input into both documents, Lynn Hirst providing further information re the cost of Physiotherapy input into the management of a child with limb loss. The Cost of Meningitis document was being utilised to aid lobbying of the DOH to support the introduction of new vaccines.
On behalf of BACPAR and SPARG Mary Jane Cole and Louise Whitehead started the process of liaising with Ortho Europe to update the information provided with the PPAM aid.
Matt Fuller (PRO) ordered and took delivery of some new promotional products for the BACPAR stand which have been available at the conference.
BACPAR was offered the opportunity to collaborate with the SPEEAD conference (held last week) in Glasgow, because of its location it was felt that it would be too far north for a BACPAR conference- were we correct in this assumption? Response was yes.
The Improving Veteran Health Outcomes consultation to be undertaken by Dr Murrison was launched. BACPAR inputted into this consultation in March having captured supporting information at the Exec Committee meeting.
This consultation has recently been published, it having been submitted to the PM in June. It has been posted on the Amp rehab site. 12 recommendations outline the proposed development of national specialist prosthetic and rehabilitation centres for amputee veterans across the UK, supported by £15 million investment.

February 2011
Hannah Slack and Katrina Wilkin took 2 BACPAR motions to ARC. The motions:
Requesting the CSP to lobby government to provide appropriate funding for veterans treated by the NHS and to ensure that the development of wider tendering for Physiotherapy services would still ensure appropriate support for CPD and student placements. The motion relating to post MOD funding of services for servicemen attracted a lot of interest. A press release was prepared, my first experience of this, with the CSP and Hannah was interviewed for BBC Manchester. Both motions were passed, having been well supported by ARC delegates. Than you to Hannah and Katrina for representing BACPAR at ARC 2011.
The Transfemoral Predictor Tool was made available by SPARG to the membership. On iCSP and later in the spring 2011 journal.

March 2011
A new membership year commenced, which now included the new Support Worker category.
Membership numbers are a little lower compared to last year: a reduction in full members, an increase in associate members and 7 support workers.
The Executive committee met at the CSP on the 1st of March also with 17 attendees and 11 apologies; those unable to attend providing reports on their action points.
In the meeting we started the update of the Service Portfolio which included an updated SCOT analysis and Work Plan for the coming year (a copy of which was also made available in the Autumn 2011 BACPAR journal)
It was also reported by Penny Broomhead (Education officer) that there were insufficient numbers for the PG Cert to run in 2011, Penny has taken a register of interest (vs. commitment) from delegates over the last 2 days
A bursary was awarded to Laura Burgess to support her visit to Costa Rica. The BACPAR financial year runs from July to June, any residual amount is added to the £1000 pot for the next financial year.
BACPAR Bursary applications are welcome from all current full members who have held a membership for the current and previous membership year and are encouraged through notices in the BACPAR journal.
Feedback re the use of the Outcome measure toolbox was reported on by Mary Jane and the exec agreed to the next steps of gaining some feedback from other MDT members to explore the merits of widening its use as an MDT toolbox. This feedback was subsequently gathered over the summer.
The 2011 Conference team of Sue, Lysa and Penny volunteered to take the task on and we also agreed in principal that the 2012 conference would be held jointly with ISPO UK and Julia Earle and Mary Jane Cole agreed to take on the task of liaising with the ISPO UK chair Laura Burgess to ensure BACPAR membership's needs would be met.
Yorkshire region (10 members) held a regional therapy meeting and South Thames (44 members) held a vascular course attended by 45 delegates; both members and non-BACPAR members.

Matt Fuller attended the APLLG meeting taking an update from BACPAR with him, which included our disappointment at not being included in the initial development of the Guidance on National Commissioning document and the outline of the feedback that we had sent to Dr Murrison alongside the usual update re BACPAR projects.
Mary Jane Cole attended the launch of the OT Guidelines for Lower Limb Amputee Rehabilitation.
The initial format for the new BACPAR website was launched. A BACPAR working party of Matthew Fuller, Mary Jane Cole, Sue Flute Julia Earle and I liaised with Nigel Senior at the CSP to pull the initial outline together. http://bacpar.csp.org.uk/ has since been edited and updated to its current format.

April 2011
The Spring Journal was published this month; featuring a review of the 2010 Conference, an overview of the long awaited Transfemoral Fitting Predictor and some related work submitted by Liz Bouch for her PG Cert in Amp Rehab, Mary Jane's postcard from India (for which Mary Jane had received a bursary), copies of the Conference posters, the Risks to the Contra-lateral Foot of Unilateral Lower limb Amputees guidance and the minutes of the 2010 AGM, amongst other reports and articles. The journal is well supported by Prosthetic Company sponsorship, it is sent out not only to the membership but also to key stakeholders in Amputee Rehabilitation- the list of which is being reviewed before the publication of the next journal.

May 2011
A BACPAR study day was held in Wales (5 members).
The West Midlands (20 members) held a regional meeting, which included a presentation on Falls management and Wendy Mayhew agreed to share the regional rep role alongside Hilary Smith.
Mary Jane represented BACPAR at the SPARG meeting this month.
3 Amputee Rehabilitation research projects made the top 30 in the CSP Research Priorities Project.
- Models of physiotherapy management of the new lower limb amputee
- Modalities of PLP management
- Amputee use of the prosthetic limb

The implications of this success are being discussed by a working party within the current 2 days. What does BACPAR do with this outcome? There are at least 2 projects in process at the current time re PLP management. BACPAR members have been invited to participate in these projects through postings on iCSP and emails to individual members.
Having taken part in the Southampton project I can vouch for the fact that it is easy and painless to participate in.
Julia as membership secretary has been emailing the membership with information about non BACPAR courses as well as offers of involvement with research—any objections to the Executive committee using your email addresses in this way? None highlighted.
The outline of the Professional network constitution was provided by the CSP, upon which we are modelling the Constitution which has been shared with the membership for discussion at this AGM.
The BACPAR stand went with Matt to a Diabetic Master class at King's College Hospital in London; unsurprisingly individuals with diabetes attending the event did not come too close.

June 2011
20 delegates attended a study day in the North West region, including 3 from the Northern region.
BACPAR were invited to participate in the development a Cancer Action team AHP Sarcoma Pathway. Jennifer Fulton agreed to represent BACPAR in this.
I attended a PNCF meeting where the Affiliation Agreement was discussed re how Professional Networks would maintain recognition with the CSP.
The Client Group Alliance is: ACPWH (Women's health), CPPC (continence), ADAPT (working outside of the UK), CPMH (Mental health), AGILE (older people), ACPTR (therapeutic riding), APCP (paediatrics), ACPOPC (oncology), ACPPLD (learning difficulties), BACPAR, ACPC (Community)

The man implication of this agreement is that PNs are required to have a minimum of 100 members and despite a paper to the CSP this has been upheld. Some PNs will merge with larger groups.

July 2011
North Thames (20 members) held a study day re the use of the Gym Ball in Amputee Rehabilitation.
Yorkshire region also got together.
BACPAR received a request for the Prosthetic Guidelines to be translated into Spanish for use by educational and health bodies in South America and more recently a request to translate the Remaining Foot guidance also.
Nic Carrington as APLLG rep attended the APLLG meeting at which Dr Murrison gave a brief outline of what his report, at the time with the PM, would convey.

August 2011
All stakeholders were contacted re the new BACPAR website following editing and updating to the committee's specification.
BACPAR submitted their concerns re the Outline Constitution for Professional Networks specifically in the CSP's requirement for all Support Worker PN members to be CSP members. In September it was confirmed that the Constitution Outline would be upheld.
Jane Cumming agreed to be the expert representative of Advancing practice in Amputee rehabilitation to the AHP Federation.
Over the summer the Exec Committee keep each other informed through postings on the Exec site.

September 2011
18 attendees and 10 apologies attended the exec meeting at Oak Tree Lane.
Bursaries were awarded to
Sue Flute, Chantal Ostler and I
There are still funds in the Bursary pot for the rest of the financial year (June 30th 2012). Any application will be considered at the next meeting in the Spring.
A new book proposal brought together by the BBC (BACPAR book Club) was discussed at the meeting. A working title of Contemporary theory and practice in Amputee rehab was considered and the proposal was being updated with EXEC comments before being sent off to Elsevier for their consideration.
We were informed that the most recent cohort had passed the Independent study module, producing guidance re the non-medical management of oedema. Tim and Karen pledged to help the authors to bring this piece of work to a wider audience hopefully in time for the 2012 conference.
There was another study day in Wales, Vanessa Davies' last before her retirement at the end of September. The role of regional rep was handed over to Jo Burton who attended the Exec meeting alongside Vanessa in Birmingham.
Fiona Brett agreed to take on the role of lead regional rep, from Vanessa and has led a meeting of the regional reps during the conference.
Trent region (14 members) held a study afternoon.
Nic Carrington stood down as South Thames regional rep after 8 years, thank you for your input and hard work. Nic is happy to continue in the non-exec role as APLLG rep. A volunteer has come forward to fill the rep role; this is to be agreed within the region.
BACPAR had a representative, Melissa Berry, at the Paediatric limb loss guideline meeting, this project (brought to our attention again yesterday by Maggie Donovan-Hall) is still in its early stages. Lynn Hirst is the BACPAR representative to this project on an ongoing basis.

October 2011
The Murrison report became available "a better deal for military amputees".
2 motions have been developed by Hannah Slack on behalf of BACPAR for ARC 2012 requesting that the CSP.
- Ensure appropriate arrangements for clinical supervision and professional development for those whose posts are transferred out of the NHS (as has been an experience of at least 1 BACPAR member within the current year)
- protect against the decommissioning of essential services /specialties as cost cutting actions

These have been submitted to the CSP, unfortunately that have not been accepted as it was not clear what we were asking conference to. From comments at the BACPAR stand in the last two days the membership wishes that the motions are re presented to the CSP as 1 motion and Hannah has agreed to do this on BACPAR's behalf.
BACPAR will have 2 places to attend ARC so again these will be made available to the membership.
The BACPAR stand went to ISPO UK and was manned by Mary Jane and Sue Flute.
The Autumn Journal was published, another excellent edition with a stiffer cover at no additional cost. The journal content included a goodbye from Vanessa Davies MBE on her retirement. Regional reports, a case study and a literature review also included amongst other items.
I attended a PNCF meeting at the CSP, at which the Affiliation agreement was updated and the Client Group alliance made arrangements for its first meeting. (In February 2012). The CSP also requested "links" to be made between regional and country board representatives of the PNs and the CSP regions and Country Boards. This has duly been arranged.
SPARG (Scotland has 6 BACPAR members) held a study day in which the Outcome measure toolbox was being discussed.
The Updated 2003 Prosthetic Guidelines are with Ralph Hammond at the CSP. An external review has been carried out, and now the CSP's publication team are tidying it up, ahead of CSP endorsement. Thanks to Karen Clark and Tim Randall for their hard work and persistence in this project.
Nic attended the APLLG meeting at which there was an announcement about the European Limb Loss day.

November 2011
The 2011 Conference has brought 127 delegates together here in Leicester, organised by Sue and Justin Flute, Lysa

Downing and Penny Broomhead. It is not possible to bring the conference to the membership without the hard work of the organising committee; members of the exec committee on the day, the support of the sponsors, and of course the speakers.
This year we are electing a new Honorary secretary –thank you very much to Ruth Woodruff for her carrying out of the role for the last 6 years (2 terms of office). The position of iCSP facilitator is also up for nomination, at the end of its first term. Currently held by Paula O Neill- now back in the UK
At the conference Penny Broomhead has set up a survey re the likelihood of finding sufficient individuals to participate in future PG Cert. courses at Bradford University.
Earlier this month the CSP requested that the public information on the website on Amputee Rehabilitation were updated Matt Fuller has completed this on BACPAR's behalf.

To the future
Mary Jane and I are attending the launch of the European Limb Loss Day (ELLD) at the House of Commons on the 29th November.
This first ELLD is part of the European Day of People with Disabilities on the 3rd December, raising awareness. Members may wish to consider how this can be marked in their workplaces.
I will attend the first meeting of the client Group Alliance in February – a chair of this group will be chosen from within the group.
The deadline for the Spring Journal 2012 is February 10th.
The new membership year will be 1st March 2012.
The executive committee will meet in March and September.
Mary Jane and Julia Earle will continue to work with the organising committee of ISPOUK conference 2012, to produce a BACPAR/BAPO/ISPO conference.
At the AGM 2012, be warned…there will be a number of posts for election.
The following officers will be at the end of their first term and can continue in the posts if voted in again, should they wish to continue.
- Journal Officer
- PRO
- Membership secretary
- Guidelines Co-ordinator
- Research Officer

The individual in the Education officer role will be at the end of her second term.
The re recognition process for professional networks will begin in February, which bring me to the final item of this report and the vote.
Initially in addition to having 100 members, in order to be recognised by the CSP our constitution needs to reflect the content of the Outline Constitution.
The constitution with its amendments highlighted has been circulated to the membership and posted on iCSP for your perusal.
Some amendments have been made purely to tidy up the constitution and others directly in response to the requirements of the draft constitution.
The following slides will take us through the amendments and the executive committee will ask you to vote (Full members only as per the current constitution and 1 representative from a departmental membership) to support the new constitution. This would be implemented for the new membership year.
If BACPAR is not recognised in this process.
It will
- Lose the BACPAR website currently hosted by the CSP
- Lose capitation fees (per CSP member)
- Lose the right to hold meetings at the CSP (1 per year) free of charge
- Lose the PLI supplied for the network
- Lose CSP endorsement of BACPAR's outputs.

Constitution Changes
1. The following additions to the objectives are to meet the CSP constitution outline requirements

   • To establish and promote the implementation of best practice in the field of amputation and limb deficiency rehabilitation.
   • To support CSP policy and strategy where relevant to amputation and limb deficiency rehabilitation.

No comments from the membership.

2. The following are amendments to the support worker status of membership and the requirement for support workers to be CSP members. Also specific mention of the need for overseas Physios to be registered with the governing body in the country they are working if one is available. NB Physiotherapists working/volunteering outside of the UK for a UK charity will not require this additional registration.

- Full membership, upon payment of the BACPAR membership fee, is open to any Physiotherapist, technical instructor or assistant who is registered as a current member of the CSP.
- Physiotherapists working within the UK will be HPC registered.
- CSP members working outside of the UK will be registered with the appropriate governing body of the country they are working (should one be in place).
- CSP associate members will receive full membership at a reduced rate.

Some requests for clarification had been made in advance of the AGM. Amendments made as a result were made known to the AGM. No further comments from the membership were made at the AGM.

3. Allied Associate Membership:
Open (at the discretion of the National Executive Committee), to
a) those from professions who are not eligible to join the CSP. All such members will have membership of a health or professional body or association as appropriate to their role.
b) any physiotherapist, working outside of the UK, who is not a member of the CSP providing they are a member of the governing body of the country in which they are working (should one be in place).

Student Membership:
Any student of physiotherapy may join as allied associate status, paying an annual reduced fee.

The above changes reflect the name change to avoid confusion with CSP Associate membership category and reflect requirements of the CSP constitution outline.
Some requests for clarification had been made in advance of the AGM. Amendments made as a result were made known to the AGM. No further comments from the membership were made at the AGM.

4. Honorary Officers
a) For BACPAR this is currently Honorary Education Officer, Honorary Journal Officer and Honorary Research Officer.

b) The positions of Chairman, Vice Chairman, Education, Research, PRO, SPARG liaison officer and all regional reps will be held by Physiotherapists that are full BACPAR members.

c) Where a full member is not nominated for an honorary officer role, allied associate members may be nominated at the discretion of the executive committee.

The above changes reflect that there is no longer a CIGLCO and use of term Allied Associate.

No comments from the AGM.

5. Executive Committee
b) The Executive Committee shall comprise of:
The Honorary Officers.
The elected regional representatives.
Co-opted members thought necessary to the function of the committee: SPARG liaison officer, guidelines co-ordinator, interactive CSP officer, and diversity officer.
Co-opted members should not exceed 30% of the members referred to in 4a) and b).

The above reflects the non-function of CPD co-ordinator role and programme co-ordinator role

e) The majority of Executive members must be CSP members.
f) An executive member may hold dual roles on the committee e.g. Honorary Secretary and Diversity officer.

Reflecting the outline constitution and the non- function of the CPD co-ordinator.

6. Insertion of abbreviations for AGM .

7. Insertion of abbreviations for GM
8. Insertion of abbreviations for EGM.

14 Cessation of BACPAR
d) Notification of the cessation shall be lodged in writing to the Chair of the Professional Practice and Service Delivery (PPSD) Committee who will inform the CSP Council.

To reflect that CIGLC no longer exists.

No comments received from AGM.

Outcome Majority vote to accept the constitution with the aforementioned changes - Yes

No further BACPAR activities added to report from the membership
End of Chair's report

Louise Tisdale
15th November 2011.

TREASURER'S REPORT

Presentation of BACPAR accounts from 1st July 2010 to 30th June 2011
Key financial issues

Presentation of BACPAR accounts from 1st July 2010 to 30th June 2011

Income	£	Expenditure	£
Subs	8,110.00	Travel	2,010.46
Course fees	11,591.00	Printing	2,042.38
Course sponsorship	2,400.00	Postage/Stationary	518.00
		Bursaries	250.00
		Gifts	203.42
		Other	645.00

Income	22,101.00
Expenditure	15,176.91
Bank reconciliation	13,502.35

Opening reserves	6,578.00
Surplus	6,924.00
Bank reconciliation	13,502.39

Key Issued Financial Issues
Chair as additional signatory on bank account.
Ongoing increase in financial turnover.
Capitation fees claimed from the CSP for last 3 years
Mileage rate set in line with CSP recommendations
Pay Pal not viable –awaiting CSP world pay system
Support for the conference costs of the person who takes the BACPAR stand to conferences (i.e. ISPO) now in place
Assistant Treasurer post created as support and learning role.
Account set up for on-line journal
Cost of production of revised guidelines
Bursaries awarded

SPARG REPORT

We had our bi-annual SPARG meeting on the 27th October 2011. As usual it was very well attended with representatives from most Scottish amputee rehabilitation centres. The morning was busy with a packed agenda of discussion, updates

on audit & research, with a study afternoon looking at Outcome Measures described in the BACPAR toolbox, with some of our OT colleagues attending.

The 2010 data was collated and will be finalised early next year with report to follow.

The SPARG website is now up and running and can be accessed using your Athens password on www.knowledge.scot.nhs.uk . There are links to BACPAR, BAPO and the Murray Foundation. Details from Mairi Ross in Inverness.

Intermittent Claudication – revised document nearly finished & should be coming out for final consultation before Xmas – thanks to those in BACPAR who have volunteered to read over it for us.

Functional Co-morbidities Index - we are looking at the FCI relating it to outcome (LCI-5 and whether fitted; with links to aetiology & level of amputation) and the items which predict a poor outcome are angina, PAD, visual / hearing impairment & obesity. Adding in cognitive status didn't change the results surprisingly, however, haemodialysis did. This work is ongoing and we will keep you posted on progress.

Murray Foundation are looking to make a new DVD focusing on patients who are not for fitting – we currently have DVD's of how prostheses are made, going home & a general overview – The Way Forward – as well as booklets given to all amputees – one for fitted, the other for the patients not likely to be fitted.

Transfemoral fitting predictor – some centres are using to aid assessment of patients – at present there is no score which predicts whether someone is likely to be fitted but it would appear from a local audit that they would score over 30 out of 36 to have a successful outcome. Due to so many other factors which need considered it should only form a part of the assessment.

SOTA – group looking at the provision of prosthetic services for military amputees – research project looking at prescription of high spec prostheses and outcome

Outcome measures study pm
We had talks on all the outcome measures in the BACPAR toolbox except the LCI-5 because we routinely use this with all patients in Scotland. Before the event I think a lot of us thought we would reach a consensus at the meeting and maybe pick one which would cover everything. As it turned out we felt as a group that most of the measures had something to offer e.g. the AMP PRO was suitable for use with IP's; whereas the ABC we felt was more suited to patients once home as when they scored their confidence as an IP it was often higher than once they were home and had tried the tasks. We are planning in my dept to look at them all and maybe determine a protocol for use – currently we are using the AMP PRO but have in the past used TUG.

Our next meeting is Thurs 26th April 2012 and the study pm with be a mixed bag of topics – IC, FCI, Murray Foundation – non fitting DVD, research looking at predicting outcome after amputation (Fiona Smith). We plan to have a theme at the October 2012 meeting which will probably be related to diabetes.

Louise Whitehead, Physio Team Lead, Ninewells Hospital, Dundee

NOMINATION OF OFFICERS.

SECRETARY	Nominated:	Lucy Holt.
	Proposed:	Ruth Woodruff
	Seconded:	Chantel Ostler

Result: Unanimous Vote for Lucy Holt to become Secretary replacing Ruth Woodruff

iCSP CO-ORDINATOR	Nominated:	Paula O'Neill
	Proposed:	Louise Tisdale
	Seconded:	Jo Wilkinson

Result: Unanimous vote for Paula O'Neill to continue as iCSP co-ordinator for a second term.

ANY OTHER BUSINESS. None.

Louise Tisdale closed meeting.

BACPAR Honory Officers 2011/12

CHAIRMAN: Louise Tisdale
Physiotherapy Dept, Maltings Mobility Centre, Herbert Street, WOLVERHAMPTON, WV1 1NQ
Tel: 01902 444721
E-mail: Louise.Tisdale@wolvespct.nhs.uk

VICE CHAIRMAN: Mary Jane Cole
Tel: 07884232330
E-mail: Maryjrcole@aol.com

HON SECRETARY AND DIVERSITY OFFICER: Lucy Holt
Prosthetic Services, Mary Marlborough Centre, Windmill Road, Headington, OXFORD, OX3 7LD
Tel: 01865 227272
E-mail: Lucy.Holt@noc.anglox.nhs.uk

HON TREASURER: Anne Berry
Harold Wood DSC, Harold Wood Hospital,Gubbins Lane, ROMFORD, RM3 0AR
Tel: 01708 796217
E-mail: Anne.Berry@haveringpct.nhs.uk

HON PRO: Matthew Fuller
Physiotherapy Department, Vascular Gym, 3rd Floor Lambeth Wing, St Thomas' Hospital, Westminster Bridge Road, LONDON, SE1 7EH
Tel: 0207 188 7188
E-mail: matthew.fuller@gstt.nhs.uk

HON MEMBERSHIP SECRETARY: Julia Earle
DSC, Medway Maritime Hospital, Windmill Road, GILLINGHAM, Kent, ME7 5NY
Tel: 01634 830000 ext. 3926
E-mail: julia.earle@nhs.net

HON JOURNAL OFFICER: Sue Flute
Pine Cottage, Colman Hospital, Unthank Road, NORWICH, Norfolk, NR2 2PJ
Tel: 01603 251270
E-mail: bacpar@flutefamily.me.uk

HONORARY RESEARCH OFFICER: Alex Weden
Mobility Centre, Nottingham City Hospital, Nottingham University Hospitals, Hucknall Road, Nottingham, NG5 1PB
Tel: 01159 691169 ext. 57535
E-mail: alexanderweden@hotmail.com

EDUCATION OFFICER: Penny Broomhead
E-mail: pennybroomhead@googlemail.com

IGUIDELINES CO-ORDINATOR: Karen Clark
Amputee Rehabilitation Centre, Derby Royal Infirmary, Derby Hospitals Foundation Trust, London Road, DERBY, DE 2QY
Tel: 01332 347141 ext 2975.
E-mail: Karen.clark4@nhs.net

GUIDELINES CO-ORDINATOR: Tim Randell
Clinical Specialist Physiotherapist, Dorset Prosthetic Centre, Royal Bournemouth Hospital, Castle Lane East, BOURNEMOUTH, Dorset, BH7 7DW
Tel: 01202 704363
Fax: 01202 704364
E-mail: tim.randell@rbch.nhs.uk

SPARG REPRESENTATIVE: Mary Jane Cole
Tel: 07884232330
E-Mail: Maryjcole@aol.com

REGIONAL REPRESENTATIVES 2011/12:

NORTHWEST/MERSEY
Liz Bouch, Vascular Outreach Team, Platt Rehabilitation, Manchester Royal Infirmary, Oxford Road, MANCHESTER, M13 9WL
Tel: 0161 276 3642.
E-mail: Elizabeth.bouch@cmft.nhs.uk

Marc Hudson, Physiotherapy, Disablement Services Centre, Cavendish Road, MANCHESTER. M20 1JB
Tel: 0161 611 3769
E-mail: marcmywords@gmail.com

TRENT
Sarah Drury/Clare Williams, Physiotherapy department, Doncaster Royal Infirmary, Armthorpe Road, DONCASTER, DN2 5LT
Tel: 01302 366666 ext. 4136 bleep 1461
E-Mail: sarah.drury@nhs.net, clare.williams4@nhs.net

WEST MIDLANDS
Hilary Smith, Physiotherapy Department, Queen's Hospital, Belvedere Road, BURTON-on-TRENT, DE14 0RB
Tel: 01283 566333 Ext. 5032
E-mail: hilary.smith@burtonh-tr.wmids.nhs.uk

Wendy Mayhew, West Midlands Rehabilitation Centre, Oak Tree Lane, Selly Oak BIRMINGHAM. B29 6JA
Tel: 0121 371 2000
E-mail: wendy.mayhew@bhamcommunity.nhs.uk

NORTH THAMES
Kate Primett, Royal Free Hospital, Hampstead Heath, Pond Street, LONDON, NW3 2QG
Tel: 020 779 40500 Blp: 2368
E-mail: kate.primett@nhs.net

Natasha Brett, Physiotherapy Department, Royal National
Orthopaedic Hospital, BrockleyHill, STANMORE, HA74LP
Tel: 020 909 5820
E-mail: Natasha.brett@rnoh.nhs.uk

YORKSHIRE
Lynn Hirst, Physiotherapy, Prosthetics Service, Seacroft Hospital, York Road, LEEDS, LS14 6UH
Tel: 011320 63638
E-mail: Lynn.Hirst@leedsth.nhs.uk

NORTHERN
VACANT

EAST ANGLIA
Sue Flute, Pine Cottage, Colman Hospital, Unthank Road, NORWICH, Norfolk, NR2 2PJ
Tel: 01603 251270
E-mail: bacpar@flutefamily.me.uk

Lysa Downing, Addenbrooke's Rehabilitation Clinic, (Clinic9) Addenbrooke's Hospital, Cambridge University Hospitals NHS Foundation Trust, Hills Road, CAMBRIDGE, CB2 0QQ
Tel: 01223 217 879
E-mail: lysa.downing@addenbrookes.nhs.uk

WESSEX
Chantel Ostler
E-mail: Chantel.ostler@sky.com

Katharine Atkin,
Portsmouth DSC., St Mary's Hospital, Milton Road, PORTSMOUTH. PO3 6BR
Tel: 02392 286000 ext. 3970
E-mail: katharine.atkin@porthosp.nhs.uk

SOUTH THAMES
Fiona Brett, Vascular Clinical Specialist, Physiotherapy OP Department, Kent and Canterbury Hospital, Ethelbert Road, Canterbury, Kent.
Tel: 01227 766877 ext. 73032
E-mail: Fiona.Brett@ekht.nhs.uk

Jodi Georgiou, Bowley Close Rehabilitation Centre, Farquar Road, Crystal Palace, LONDON
Tel: 020 3049 7724
E-mail: jodi.georgiou@southwarkpct.nhs.uk

OXFORD
Lucy Holt, Prosthetic Services, Mary Marlborough Centre, Windmill Road, Headington, OXFORD, OX3 7LD
Tel: 01865 227272
E-mail: Lucy.Holt@noc.anglox.nhs.uk

SOUTH WEST
Helen Jones/Jain Ord, Community Rehab Team/Lamona Ward, Camborne/Redruth Community Hospital, Barncoose Terrace, REDRUTH, Cornwall, TR15 3ER
Tel: 01209 881647/881630
E-mail: Helen.jones@CIOSPCT.cornwall.nhs.uk
Jain.ord@CIOSPCT.cornwall.nhs.uk

IRELAND
Carolyn Wilson
E-mail: carolyn.wilson@belfasttrust.hscni.net

WALES
Jo Burton, ALAC, Rookwood Hospital, Fairwater Road, Llandaff, Cardiff, CF5 2YN
Tel: 02920 313921
E-mail: jo.burton@wales.nhs.uk

SCOTLAND
Louise Whitehead
Email: lwhitehead@nhs.net

Guidelines for Journal Article Submission

Submitting a document:

- Please send the article as a Word or PDF file.

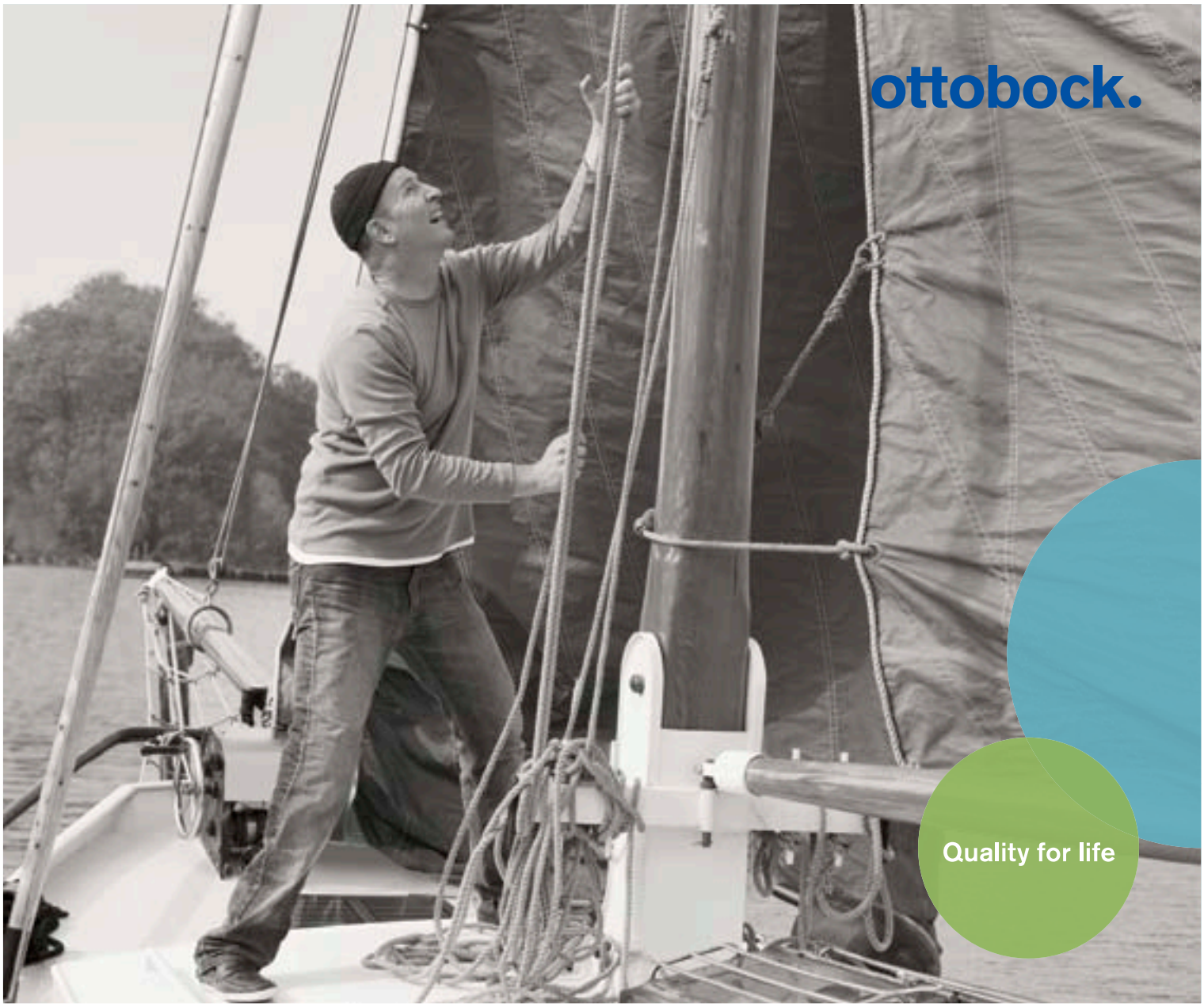
- If your article includes pictures please also send these as separate files (JPEG, BMP, GIF, PNG etc format) at the highest quality you have.

- If your article includes graphs please also send these 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). If all the graphs are in one Excel file this is fine.

- Finally, if there is anyone out there who would like to advertise in The Journal, or if you know anyone who you think would like to, please let me know.

Please email bacpar@flutefamily.me.uk with your submissions and any queries

DEADLINE for AUTUMN edition
Friday 17 August 2012



Mobility is crucial

For Carsten, 49, a Project Manager in the Environmental Industry, mobility is one of the most critical factors, in both his personal and professional life.

'I have to be very active at work in order to fulfill my role, climbing around waste treatment facilities in order to assess if the technology is functional and if the quality is acceptable. In my private life, after running around at work all week, I need to find a balance.

I generally seek that balance with my three children and for recreation; I have the option of sailing with friends. Being part of a three-person team I have nowhere to hide, rigging and de-rigging the boat can be a complex procedure and I need to remain agile to interact with the mud, sand, soft and slippery surfaces, as well as rough terrain both on and off shore and require a prosthesis that can keep up with my needs. My Triton Harmony® enables me to do this by allowing the same function my natural lower leg and foot provided.

It is important to me that I am able to continue living life to the full doing all the things I love without worrying about my mobility – playing tennis, volleyball and sailing and I am looking forward to picking up a few tips whilst watching the paralympic sailing at Weymouth and Portland Harbour during this years paralympic event'.

Your life, your adventure

provider

Official Prosthetic, Orthotic and Wheelchair Technical Service Provider of the 2012 Paralympic Games

Ottobock · 0845 600 7664 · www.ottobock.co.uk