BACPAR

BRITISH ASSOCIATION OF CHARTERED PHYSIOTHERAPISTS IN AMPUTEE REHABILITATION

The Journal
Issue 40, Spring 2014

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Hello members, advertisers and contributors to the Spring 2014 BACPAR journal

As ever thanks to Sue Flute, BACPAR's illustrious Journal officer, for bringing this edition together.

The Journal is something of which BACPAR is justifiably proud and the function of bringing it together, on behalf of the membership, is indeed an impressive deed. A sentiment that the membership agrees with, judging by the results of the 2013 BACPAR membership survey.

Other BACPAR activities of high priority to the membership are the publication of Clinical Guidelines and the Toolbox of Outcome measures and the planning and delivery of the annual conference.
More feedback re the results of membership survey later in this edition.

The Executive committee will be looking at the results and comments at the next meeting; turning issues raised into action points for the BACPAR work plans 2014-2017.

Feedback regarding the BACPAR 2013 20th anniversary conference was excellent. The vast majority of respondents (90%) reported that the conference was mostly or highly relevant to clinical practice, that the quality of education was good or excellent (96%) and 94% felt it was a very or definitely effective conference for CPD purposes. As ever, we also received feedback that will enable us to deliver 2014's conference to the same high standard. And.. the cake was fabulous too. So on behalf of the Committee thank you to the conference organisers; Julia Earle, Penny Broomhead and Clare Singh and thank you to delegates for their feedback.

2014 shall hopefully bring an update of the Outcome Measures Toolbox; an interim report re which from Judy Scopes (working party lead) is in this edition. There has also been progress in the update of the pre and post op guidelines. Based on the feedback from the Education Officer's survey regarding the need for Masters Level CPD in amputee rehabilitation, an offer has gone out to higher education institutes to collaborate with BACPAR to develop the same. When we have more news we will update you.

Agreed at the AGM, the merger of the regions Wessex and Oxford, to create the South Central region. And as requested by the membership; further work will be carried out by the Committee to explore the requirements for SPARG to receive recurrent funding from BACPAR.

Also as a result of agreement of the Membership at the 2013 AGM the BACPAR research bursary has been launched. Details of this £3000 fund are available on the BACPAR website http://bacpar.csp.org.uk/news/2014/01/05/bacpar-research-bursary-launch . The Committee looks forward to reviewing bursary applications for this and the Education bursary fund http://www.csp.org.uk/documents/bacpar-bursary-guidelines?networkid=225939

As ever, if you wish to make any comments re BACPAR activities and future projects please do not hesitate to contact me at Louise.Tisdale@nhs.net

Louise Tisdale - BACPAR Chair 2014

BACPAR 2013 Conference Review

Last year the annual 2 day BACPAR conference was again held in Wolverhampton. Organised by a small team from the BACPAR exec and probably many more people behind the scenes.

The two days covered both prosthetic and non prosthetic themes and I'd like to write about the conference highlights for me, in no particular order.

Nikki Tebbutt started the first day by outlining the importance of understanding and managing diabetic blood sugar levels when exercising and treating this patient group. It was concise and presented in a fun way but in no way shied away from the serious implications of hypers or hypos occurring in the physiotherapy gym. Patients can have signs and symptoms of of a hypo, even if their BM is > 4. Nikki reminded us what constitutes quick acting (2 jaffa cakes, 100ml Lucozade, 4-5 Gluco Tabs, 150 ml coca Cola or 4 jelly babies) and longer acting carbohydrates (banana, apple, 2 digestive biscuits, cereal bar, glass of milk, fruit juice).
Nikki recommends that we should keep a log book of hypos, make sure that CBG monitors are easily at hand, train and regularly update staff who work with this patient group. Since the conference, we have discussed the need to review our practice of diabetic patients attending physiotherapy appointments or to our exercise class. We need to widen this discussion to include all services who have diabetic patients attending clinics – a project for a willing band 5 perhaps...

Phantom limb pain and patient information regarding this subject was covered in a lecture by Maggie Donovan Hall, in which she confirmed that the research findings in this clinical area differ according to frequency, how it was measured, differentiation between phantom limb pain, sensation and residual limb pain and the classification of PLP. Mortimer (2002 & 2004) found that patients receive inconsistent information and that patients were unhappy with how PLP was discussed, addressed and found it important to get the information from other patients, family and friends. Suggestions to improve practice included : have an information officer, have access to a pain specialist, tailor the information to individual patients and having a weekly sessions and patient representatives for patients to discuss with each other.
Again, within our small team of therapists, we have identified the need to look at the written information we provide our patients. We do not feel that we can provide individually tailored information for each patient but perhaps have a few booklets eg. One that is more pictoral, one that has facts and figures and 1 that has medical references.

Carolyn Hirons and Louise Tisdale both presented very interactive lectures, that definitely caught everyone's attention. Louise presented 'Exercising the lateral abdominals – their importance in lower limb amputee rehabilitation'. With the aid of a web cam and her very willing patient, she recapped how important it is to understand the involvement of the lateral abdominals and how to improve the control through range, resulting in improved efficiency of prosthetic gait and potential reduction in pain and post amputation impairment.
Carolyn's presentation was entitled 'Essential physiotherapy – the influence of posture and movement control in prosthetic use'. She outlined how different 'normal' posture can be in 'normal' people and how this again changes post amputation. The changes in posture post amputation can then lead to incorrect prosthetic alignment that then reaffirms the 'poor' posture and further poor movement control. She cleverly steered us through the following clinical questions :

When should a prosthesis accommodate poor posture ? **Vs** When should a prosthesis correct a poor posture ?

The patients, prosthetic and physiotherapy 'problems' were outlined; namely that the patient doesn't know what to expect as a new prosthetic user and alters their posture accordingly and the established patient will have habitual poor posture and lost all sense of their midline.
Prosthetists align a prosthesis from the foot upwards, using components that are designed and developed with normal posture in mind or using 'models' who have very good posture. When asked if we think all prosthetists look at both dynamic and static bench alignment using a laser line, the prosthetists in the room went very quiet – until the conference disco !... but more of that later.

Problems for the physiotherapist include a mix of the following : not always having the knowledge of specific prosthetic components, not have the prosthetists at hand to make timely alterations to the alignment and not always having the time to rehab a patient to their full potential. We see a poor posture, address it and encourage the patient to carry out their HEP but their prosthesis may not allow the posture to change and therefore the poor posture remains. It is vital to have good communication with the prosthetic team (whether they are in the same building as you or a few miles away) to ensure that they understand what postural changes you are trying to achieve, whether improvements are being made in physio and what alignment changes can be made to support our work.

All the above was demonstrated using videos of patients gait, poor posture, asymmetries and (what I call) Carolyn's top tips for prosthetic physio. (Carolyn also won the Louise Whitehead award for best speaker.)
Both Louise and Carolyn's presentations are available on the BACPAR website and I would recommend that you take the time to look at them.

The poster presentations this year were thought provoking and insightful. Too many to outline here but for those of you who may not want to present at next years conference, a poster presentation is a good way to show case your work without having to get up on the stage. The exhibition was very well attended and again provided the delegates an opportunity to find out about new problems, problem solve clinical issues or just catch up with colleagues. The Louise Whitehead award for best poster was awarded to Kate Lancaster see page 36.

For the first time in BACPAR history, there was a disco at the conference dinner. The disco provided everyone the opportunity to see that normal movement and posture is very varied ! I shall name no names ... but a good time was had by all.

The wide variety of patients that BACPAR members work with was evident via different presentations. Eleanor Bacon (Harold Wood prosthetic centre) presented a regional audit looking at patient leisure pursuits post amputation, followed by Clare Cunningham's presentation of elite sport and elite prosthetics. The regional audit showed that the facilitators to returning to leisure pursuits are improved confidence, improved mobility, transport, availability of resources and access to the venue. The top 4 barriers were poor mobility, general health, 'other' and reduced confidence.
BACPAR's many projects and how services have evolved over the years was demonstrated by Penny Broomhead's presentation (which was a lovely trip down memory lane), the development of the Roehampton stump score (Maggie Uden) and Jodie Georgiou's overview of a new inpatient specialist amputee rehab. unit in South London. All of which helped to showcase the history of BACPAR, committee and members past and present, projects and working partnerships that have been developed over the years.

Amy Jones, Clinical Lead Prosthetic Physiotherapist - Guys and St Thomas' NHS Prosthetic Centre.

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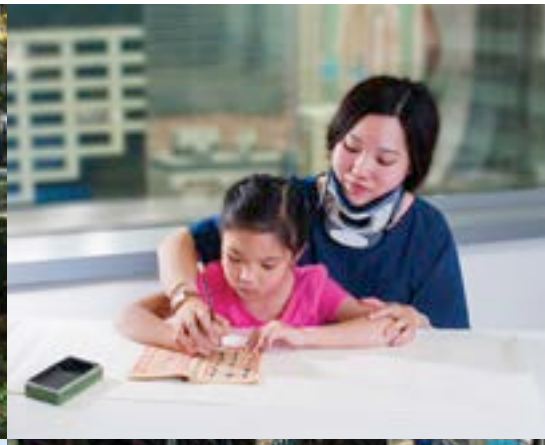





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Narrative Review of the Literature: Outcome Measures currently in use with Lower Limb Amputees in the acute care setting (pre-prosthetic phase)

Abstract

Background and purpose

A group of clinicians expert in the field of prosthetic rehabilitation were convened as the BACPAR Outcome Measures Project Group in the Spring of 2013 to undertake a review of the BACPAR Toolbox which was published in 2010. The Outcome Measure (OMs) listed in the current Toolbox all relate to prosthetic rehabilitation. In response to member's requests and comments it was decided that the work of updating the toolbox would begin with a review of current literature on the use of OMs in the acute care setting or pre-prosthetic phase. The overall aim therefore for this particular review was to reach a considered conclusion on which, if any, OM could or should be recommended to members for use with lower limb amputees (LLAs) in the acute period.

Methods

A review of the literature was conducted investigating which OMs had been reported in use with LLAs in the acute or pre-prosthetic phase. MEDLINE, CINAHL and PsychINFO were all searched in May 2013 using the search terms 'Acute Care' and 'Outcome Measures' with 'Lower-limb Amputees' OR 'Lower-limb Amputation'

Results

A total of 26 articles were found which, after screening, produced two articles that merited further reading. From these articles only the Functional Independence Measure (FIM) was identified as of potential interest and a further search was conducted adding the specific FIM title.

Conclusions

While there is evidence that the FIM is used in the acute and / or early rehabilitation phase with LLAs and can demonstrate an improvement between admission and discharge, the evidence is weak .
There was no evidence that the total FIM score was effective as a predictor tool, but there was good correlation in one study for the motor subscale with prosthetic outcome.

The FIM should be included in the next version of the Toolbox with accompanying information to assist members with their decision to use or not use the measure.

Introduction

The review group consisted of seven members, six physiotherapists and one occupational therapist, all of whom were working in the field of amputee rehabilitation, either clinically, in academia and/or research. The members were : Mary Jane Cole (PT), Jane Cummings (PT), Nancy Golland (PT), Sue Hayes (OT), Chantal Ostler (PT), Judy Scopes (PT, Group Lead) and Louise Tisdale (PT). Given that the current Toolbox concentrates on OMs used in prosthetic rehabilitation, it was decided that the first stage of revising the Toolbox would concentrate on the earlier phase of amputee rehabilitation. The use of appropriate OMs in the acute or pre-prosthetic phase of rehabilitation is a subject that has been debated many times by clinicians, more recently on the webpages of iCSP.

The intention was not to produce a full Systematic Review with meta-analyses but within the resources available complete a narrative review of the current literature to answer the review question:
Which Outcome Measures can be recommended for use with LLAs in the acute setting, during the pre-prosthetic phase of

their rehabilitation, with particular emphasis on those measures NOT used in prosthetic rehabilitation?
Following a face-to-face meeting of the group in June 2013, review methodology was discussed and agreed. Each article would be reviewed by two members of the group using a standard list of questions compiled using the checklists described in The pocket guide to critical appraisal: a handbook for health care professionals by Iain K. Crombie (Crombie 1996). See appendix 1 for the basic checklist, additional questions were added depending on the type of study being reviewed e.g. case study series, cohort studies or a review.
The overall aim was to reach a considered conclusion on which, if any, Outcome Measure (OM) could or should be recommended for use with lower limb amputees (LLAs) in the acute setting.

Methodology

Cinahl, Medline and PsycInfo searched using the following search terms; 'Acute Care' and 'Outcome Measures' with 'Lower-limb Amputees' OR 'Lower-limb Amputation'
A total of 26 articles were found but after reading the titles and abstracts only two appeared relevant, From these two articles only the Functional Independence Measure (FIM) was identified as of potential interest and a further search was conducted adding the specific title. Fifteen potential additional articles were found after this search but after screening the number was reduced to five. Including three opportunistic finds and five further articles that were cited in the original articles the total number of articles included in this narrative review was 15.

Review of the articles

A Systematic Review of the literature by Scheuringer et al in 2005 identified a large number of rehabilitation OMs which were being used in acute hospitals and early rehab post-acute facilities (Scheuringer, Grill et al. 2005). The International Classification of Functioning, Disability and Health (ICF) Framework was used as a reference to identify and quantify the concepts or areas of interest being measured. Numerous (277) formal assessments were identified as well as 351 single clinical measures. Within these assessments and measures 1,353 concepts were extracted, 96% of which could be linked to ICF categories.

The ICF is based on the bio-psychosocial model and was developed by the World Health Organisation (WHO) to document the impact of a disease or condition, on an individual level (World Health Organisation September 2003). The Framework takes into account the context in several different areas e.g. environment, age, gender, coping styles, behavior patterns etc. and there are over 1,600 categories listed. Each of the categories are listed in 3 levels of two domains: the Functioning domain and the Disability domain. In the Functioning domain there are body functions and structures, activities and participation. Within the Disability domain the levels are described as impairments, activity limitations and participation restrictions.

There were no specific amputee outcome measures listed in the Scheuringer paper, but of the formal assessments the Functional Independence Measure (FIM) and the Barthel Index were identified as ADL/functional status measures and the 10m Walk Test, the FIM, the 6 min Walk Test and the Timed up and Go were identified as measures of mobility (Scheuringer, Grill et al. 2005). For the purposes of this review i.e. measures used in the pre-prosthetic phase, the FIM and Barthel Index were of most interest. The other measures identified were not reviewed as they would require the patient to be able to walk with a prosthesis and this would exclude them from the pre-prosthetic phase. The use of the Barthel Index has been documented with LLAs but it lacked sensitivity because of the ceiling effects noted and Condie et al recommended that it should not be considered as a suitable functional outcome measure for amputees (Condie, Scott et al. 2006, Treweek, Condie 1998). It was therefore decided to investigate for further evidence of using the FIM in the early pre-prosthetic phase.

Deathe et al attempted to establish the clinical usage of the FIM through a postal questionnaire sent to all the Medical Directors of Rehab facilities in Canada, and found that 50% of them (that responded) used the FIM (Deathe, Miller et al. 2002). It wasn't clear however how many of their patients were LLAs, and how many of those were non-limb wearers in the pre-prosthetic phase.

It is interesting to note that Turner-Stokes & Turner-Stokes had done a similar survey of British Society of Rehab Medicine (BSRM) Consultants in 1997, which showed a wide variety of measures in use (Turner-Stokes, Turner-Stokes 1997). Of the global measures being used the Barthel Index and the FIM, with or without the Functional Assessment Measure (FAM) were amongst the most common. There was no comment about the use of the FIM with non-limb wearing amputees or in the acute phase. With regard to specific amputee OMs, of the 18 Disablement Centres represented in the responses 10 were using the Harold Wood score – now updated as the SIGAM Mobility grades.

The FIM is however routinely used in Veterans Administration Medical Centres across the USA and Stineman et al carried out a database audit of FIM scores to explore the expected gains in 2 models of rehabilitation: firstly a single episode of specialist in-patient rehabilitation and secondly a consultative basis of rehabilitation at one of two time points, either immediately post-op or after discharge from an acute facility (Stineman, Kwong et al. 2010). There was no analysis of the FIM itself in the study as it was only used as a means to compare the outcomes from the two models of care.
In articles that looked at the use of the FIM with LLA in acute care it was found that few concentrated solely on the non-prosthetic aspects of rehabilitation.

Leung et al prospectively studied a cohort of 44 consecutive amputees admitted to their rehabilitation unit. They looked at the FIM score at admission and discharge only. They concluded that the admission score was not useful in predicting successful prosthetic rehabilitation (Leung, Rush et al. 1996). Only the motor sub scores at discharge correlated with prosthetic use.

In a more recent study reported by Kortte et al in 2012, 174 adults who were participating in in-patient rehabilitation were followed and the use of the Hope Scale (a positive and negative effect schedule) and the FIM were studied (Kortte, Stevenson et al. 2012). The hypothesis was that greater hope and positive effect at admission would predict a higher functional skill level, as measured by the FIM, and a greater role participation three months post discharge. The results showed while the FIM was used in the early stages of rehab there was a ceiling effect noted in higher functioning subjects. There was also guarded interpretation of the results of the Hope Scale as hope may be regarded as a transient trait. However, only 22 out of the total enrolled were LLAs and the results were found to be inconclusive with such a small sample of LLAs.

Hershkovitz et al looked at the functional outcomes of elderly LLAs as measured by the FIM in a study published in 2013 and the overall findings did show that physically fitter and more functional subjects are more successful with prosthetic rehabilitation (Hershkovitz, Dudkiewicz et al. 2013). It was noted that part of the FIM score (single leg stance and walking with a Ppam aid) was used to screen those suitable for prosthetic rehab but the total FIM score was not used.
An earlier study described by Melchiorre et al in 1996 had looked at prosthetic rehabilitation and the outcomes measured by FIM scores (Melchiorre, Findley et al. 1996). This was a retrospective notes audit that looked at 12 traumatic and 12 vascular amputees. The authors did split the FIM score into a subgroup of FIM scores that were of interest to amputees, but this is not a validated use of the measure. A stump morbidity index was also developed for this study and this appeared to be a good indicator of discharge FIM scores for vascular amputees. This may be an interesting development that would be of value in the acute setting, again for predicting outcomes, however it is not known whether the stump morbidity index has been validated yet.

Muecke et al also performed a retrospective audit of admission and discharge FIM scores on 68 patients (Muecke, Shekar et al. 1992)(Muecke, Shekar et al. 1992). They noted that there are many variables in the LLA population that are not accounted for in the FIM and although it could be used to demonstrate an improvement it should be used in conjunction with other measures. They also noted a ceiling effect with some admission scores and therefore it could be limited in use for some patients. Their conclusions therefore showed that the FIM was not a reliable predictor of outcome in this group of patients.

Garrison and Merritt produced a paper in 1997 with three case studies of quadruple amputees with end stage renal disease and while the FIM did improve between admission and discharge, demonstrating improvements in ADL, it was noted that the lower function levels of the patients did not challenge the ceiling effects (Garrison, Merritt 1997).
In the study described by Czyrny & Merrill in 1994, the results did show that the FIM can be used to demonstrate the effect of rehabilitation (at least 3 hours per day) in adult LLAs irrespective of if they have end stage renal disease or not (Czyrny, Merrill 1994). However, there was no comment about the content of the rehabilitation programme and the authors did comment that the sample size was limited.

It was noted in a study by Hamilton et al on the interrater reliability of the FIM that clinicians must reach a standardized level of applying the measure and that good reliability relies on the mastery and training of clinicians in its use (Hamilton, Laughlin et al. 1994). In the USA they have a form of "credentialing" the clinician in completing the FIM by way of testing them on FIM definitions and application based on standardised written cases. The FIM reported as being especially useful when used with the whole multi-disciplinary team and the training is recommended to ensure consistency within and between centres.

Conclusion

While there is evidence that the FIM is being used in the acute and / or early rehabilitation phase with LLAs, the evidence that an improvement between admission and discharge can be demonstrated the evidence is weak.
There is no evidence for the use of total FIM score as a predictor tool, but there was good correlation in one study for the motor subscale for prosthetic outcome. Splitting the total score into an Amputee subset may be of interest but would need to be validated and there are other specific predictor scores currently being used that have been. To recommend the most appropriate predictor score would need to be the subject of another review.

There may be a place for using the FIM with LLAs in acute care setting and early rehabilitation units where multi-disciplinary teams are already trained in its use. However the comments raised here should be taken into account when choosing to use it.

This piece of work is the first to be completed in a series of projects that will contribute to the next version of the BACPAR Toolbox of Outcome Measures. It is anticipated that the next version of the Toolbox will be published by the end of 2014.

BACPAR Outcome Measures Project Group -December 2013

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WORLD HEALTH ORGANISATIONSeptember 2003-last update, ICF Checklist.http://www.who.int/classifications/icf/training/icfchecklist.pdf.

Appendix 1

BACPAR Outcome Measures Project Group

Paper being reviewed:

Title:	
Authors:	
Journal:	
Year:	
Vol:	
Issue:	
Pages:	
Reviewer:	
Date Reviewed	
Other articles identified in this paper? Please list below:	

Standard Appraisal Questions

Essential Questions	**Comments**
Design	
Are the aims clearly stated?	
Was the sample size justified?	
Are the measurements likely to be valid and reliable?	
Are the statistical methods described?	
Conduct	
Did untoward events occur during the study?	
Analysis	
Were the basic data adequately described?	
Do the numbers add up?	
Was the statistical significance assessed?	
Interpretation	
What do the main findings mean?	
How are null findings interpreted?	
Are important effects overlooked?	
How do the results compare with previous reports?	
What implications does the study have for your practice?	

Exercise Induced Hypos in Diabetic Amputees - How can we prevent and manage hypoglycaemia while providing prosthetic rehabilitation?

Guidelines for the Prevention and Management of Hypoglycaemia in Patients with Diabetes Participating in Rehabilitation.

Purpose of Guidelines

To guide Physiotherapists and Prosthetists how to recognise when increased physical activity may not be appropriate, advise patients how to manage diabetes in relation to rehabilitation and increased physical activity, and reduce risk of, recognise, and manage hypoglycaemia in the prosthetic rehabilitation setting.

We all know that physical and emotional stress relating to injury, illness and surgery, along with bed rest and decreased activity, damages diabetes control. This results in increased levels of glucose in the bloodstream 'hyperglycaemia'.

What is classed as a significant increase in physical activity

This?

What we don't always remember is that during and after increased physical activity insulin requirements may decrease due to increased insulin sensitivity in target cells, and increased glucose uptake in the muscles and liver. Pharmacologically raised insulin is not responsive to falling insulin requirements and may remain elevated at inappropriate times; furthermore, the normal counterregulatory response necessary to restore circulating glucose levels is impaired in diabetes. This results in decreased levels of glucose in the bloodstream 'hypoglycaemia'

If there is too much insulin and/or not enough glucose then a 'hypoglycaemic' (hypo) episode may occur.
Hypo's can occur when patients are treated with insulin or some diabetes tablets (Sulphonyureas: Glipizide, Gliclazide, Glibenclamide, Chlorpropamide, Gliquidone, Glimepiride, Tolbutamide, Repaglinide, Nateglinide).

The risk of hypoglycaemic episodes in Type II diabetics managed with diet, exercise and/or insulin sensitizers alone (i.e. Metformin) is minimal but can occur.

Amputee rehabilitation, through increasing levels of physical activity, contributes to hypoglycaemic risk.

More realistically the day to day rehabilitation occurring in the physio gym or prosthetic fitting room can be a very significant increase to the amputees' usual physical activity. This can easily affect their blood glucose levels both in the short term but also over the next 36 hours where the risk of hypos can continue. Please note: The risk of a night time hypo can increase following day time exercise therefore a bedtime snack is advised.

All of these activities may have an effect on the blood glucose levels of your patient – do you know and check what that effect is?

- Primary Assessment
- Standing for Trans Femoral casting
- Transferring from wheelchair to bed or standing
- Prosthetist fitting a new limb, asking patient to walk up and down the parallel bars to check height, alignment and comfort
- A physio mobilising a primary patient in the bars
- Walking with crutches
- Practising on a ramp, stairs, kerbs, uneven ground
- Getting up from the floor

What is the definition of a Hypo?

- When Capillary blood glucose (CBG) goes below 4mmol/L
- Signs and symptoms compatible with a low blood glucose
- Relief of symptoms and signs by restoration of circulating blood glucose levels = Whipples Triad (Watkins et al, 2003)

How do we help prevent Hypos?

Develop Guidelines

Train staff to recognise signs and symptoms of a Hypo:

Signs		Symptoms
• Irritability		• Decreased concentration
• Confusion		• Sweating
• Slurred speech		• Shakiness
• Pallor		• Feel hot
• Tremor		• Nausea
• Perspiration		• Hunger
• Tachycardia/Brady		• Blurred vision
• Coma/Seizure		• Drowsy/Dizzy/Weak

Train staff to take CBG levels

Provide patients with information leaflet at first attendance.

- Advise to bring appropriate food
- Ask patients to bring their own blood sugar monitoring equipment
- Make them aware of the risk of Hypos with exercise
- Advise not to inject insulin into a limb which is to be exercised within the next 12 hours, as this will increase the speed of insulin absorption.

Check Capillary Blood Glucose (CBG) before and after every treatment session.

Record CBG in patient records

Ideal CBG prior to prosthetic rehabilitation where significant physical activity will occur;

9-10 mmol/l before starting exercise (note that this is higher than the usual 6-7mmol/l that the patients are trying to maintain their CBG at normally)

If CBG below this patients must take 10-20g of carbs and wait until CBG at 9-10mmol/l
If CBG over 13mmol/l review signs and symptoms
If over 15mmol/l do not exercise unless discussed with the patient's DM care team.

Keep a Hypo box in the department:	• Fast and slow acting carbs • Log book of incidents • List of staff trained to take CBG • Chart with carbs guidelines

How do we treat a Hypo?

The alert patient:

Give 20g quick acting carbohydrate			10 mins later followed by 20g longer acting carbs;	
•	Lucozade	100ml	• Banana	
•	Glucotabs	4-5 tablets	• Apple	
•	Coca Cola	150ml (full sugar pop)	• Digestive Biscuits	2
•	GlucoJuice	ready measured	• Rich Tea biscuit	3
•	Sugar in water	3tsp sugar dissolved	• Cereal bar	
•	Jelly Beans	4	• Glass of milk	
			• Fruit juice	
			• Sandwich	if near meal time

Rehab can continue once CBG back to normal.

The un-cooperative patient:

Squeeze Glucogel inside the cheek and rub gently
Call for medical assistance/ambulance

The unconscious patient:

- Place in the recovery position
- Do not give anything orally
- Call for medical assistance/ambulance

DVLA rules

Patient not fit to drive for 45 mins after a hypo has been successfully treated CBG must not be below 5 to drive.

Physiotherapists and Prosthetists face many complex challenges when rehabilitating diabetic amputees. Many patients present with long term complications such as angina and hypertension, retinopathy, neuropathy, peripheral weakness, renal impairment and depression. In addition we have to be acutely aware that the activity levels needed to rehabilitate an amputee wearing a prosthesis will affect glycaemic control already damaged by their presenting complaint and existing complications.

With simple guidelines, training and procedures in place we can successfully rehabilitate out patients without causing distressing and potentially dangerous symptoms of Hypoglycaemia.

Niki Tebbutt - Specialist Physiotherapist in Amputee Rehabilitation. Regional Prosthetic Services

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ISPO 2013

Having only been involved in amputee physiotherapy for about 18 months this was my first opportunity to attend ISPO. Three of us from the Wirral (Sarah- Prosthetist, Ash-Doctor and me) packed our bags and went to the seaside town of Blackpool to see what it was all about. In addition to attending ISPO as a delegate we were also dipping our toes into presenting by providing two posters discussing aspects of multidisciplinary team working.

Left - me with our posters; Right - Sarah Evans with our posters

On arrival name badges and a handy satchel full of information for the weekend was issued. Clutching these in our hands we went off to find some much needed coffee and also found some tasty Danishes.

The first two talks discussed phantom pain where we told the unfortunate statistic that 80% of amputees will suffer from it, resulting in sleep disturbance, social withdrawal, depression and anxiety, to name only a few associated issues. This linked nicely into the next presentation that covered psychological adjustment post amputation which concluded that those who suffered less phantom limb pain, had increased social support and higher prosthetic satisfaction were able to adjust better to amputation.

The day continued with an interesting talk on gait efficiency in lower limb amputees by the engineer Professor Howard. The focus was on prosthetic foot componentry and how new technology was shaping this.
A key factor of gait inefficiency in amputees was highlighted as being the lack of energy gained in mid-stance, consequently reducing push off in the toe off phase in the gait cycle. The feet that were discussed focused on this issue, from a spring replacing the Achilles tendon, to a battery operated ankle. As with the developments found within microprocessor knees, this is all very exciting for the prosthetic world and will change and challenge our physiotherapy treatments. Only time will tell if we can achieve better results with the newer technology or if the compromise required in using heavier and more complex components will be too high a price for improved gait efficiency.

Then lunch was served which gave us an opportunity to take a closer a look at stands in the exhibition room. Some of the carbon fibre blades available look amazing and made me want one of our patients at the Wirral to take up an interest in competitive running so we can see them in action!

I thought one of the best lectures of the day was by a medical student called William Beswick who discussed topical negative pressure wound therapy. He gave a convincing argument for negative pressure wound management versus the more commonly used regular dressing regimes, which as he pointed out prolongs immobility and reduces limb use, and the more expensive surgical excision technique. With the addition of a few juicy pictures, he gave some of the best answers in the Q & A at the end. He is definitely a doctor to watch out for in the future.
Overall the day was a success, and it provided further insight into amputee rehabilitation with many fascinating lectures.

Caroline Cater - Wirral Limb Centre

The importance of multidisciplinary teamwork in reviewing prosthetic prescription for established service users

Sarah Evans[1], Caroline Cater[2] and Dr Azer[3]

Wirral Limb Centre, Clatterbridge Hospital

Introduction

Following the conflicts in Iraq and Afghanistan, which significantly increased the number of young active amputees in the United Kingdom, there has been an increased awareness nationally of prosthetic componentry and the associated cost of supplying increasingly complex artificial limbs [E].

Survey

In the Wirral Limb Centre every amputee is invited to be reviewed annually to ascertain progress and satisfaction with their prosthesis and the service.
In 2012 Ottobock completed a patient satisfaction survey within the Wirral Limb Centre to ascertain any areas service users felt could be improved.

Survey Outcomes

Although mostly positive feedback was received some of the long established amputees felt their prosthesis was functionally sub-optimal and questioned why improved componentry, micro-processor knees for example, were not available. Issues regarding the lack of further gait re-education were also highlighted.

Selection

After consideration of the feedback, two patients were selected to be reviewed further. Both service users were long established transfemoral amputees with complex histories and presentations.

Changes

The prescriptions of the two patients were reviewed by the multi-disciplinary team and improved significantly. Both underwent a period of gait re-education in order to utilise their new prosthesis appropriately.

Method

- The Ottobock quality of service survey was distributed to 75 patients within the Wirral Limb Centre to ascertain satisfaction with the service provided by the contractor.
- All participants were invited to discuss their feedback further if they wished.
- 2 of the participants who were particularly unhappy with their prescription and the service they received were contacted for review with the consultant and prosthetist.

Planning

- After discussion it was found that Patient 1 wished to be provided with a prosthesis which would enable him to achieve greater function despite his very short residual limb with reduced maintenance requirements in comparison with his current prosthesis.
- Patient 2 felt unhappy with the stability of her prosthesis, uses an elbow crutch to mobilise everywhere outside of her home as she feels unsafe otherwise. Also she had significantly increased her activity level to improve fitness and felt her prosthesis did not support this.
- For both patients it was decided by the multidisciplinary team that microprocessor knees and improved foot prescription may address their functional issues.

Funding

- Prior to organizing trials on both C-Leg and Genium funding was sought from the individual funding request panel
  - Evidence for C-Leg was presented in the form of literature references.
  - Videos of the successful C-Leg trial were then presented in support of Genium.
- The application process required extensive input from all members of the multi-disciplinary team to compile a document which compared the patients current prescription and function with what could be achieved with a microprocessor knee and improved prosthetic foot.

Preparation

- In both cases a gait re-education package was initiated during and post-trial.
  - For patient 2, whose C-Leg trial commenced after patient 1, gait re-education and strengthening exercises were started prior to commencement of the C-Leg trial.
  - The earlier physiotherapy input with patient 2 proved to be of significant benefit to both the patient and the multidisciplinary team in her C-leg trial.

Patient Background Information

	Patient 1	Patient 2
Age	42	26
Amputation	Right Transfemoral	Right Transfemoral
Amputation Date	1981	1991
Cause of Amputation	Osteosarcoma of Femur	Road Traffic Accident
Length of Residuum	80mm	200mm
Residuum Condition	No specific complaints	Extensive Skin Grafting over entirety of residual limb
Current Prosthesis	ESK with IP+ Knee and Dynamic Response Foot	3R60 Knee and 1M10 multi-axial foot
Employment	Research Scientist	Solicitor
Activity Level	Mobis 3	Mobis 3
Revised Prescription	Genium Knee with Triton Foot	C-Leg Knee with Triton Foot

Results

Patient 1

- Underwent a C-Leg trial with a view to receive a prosthesis that would provide the level of stability and security he was afforded with his current prosthesis without the excessive maintenance it required [F]; current prosthesis required extensive repairs every six months.
- Previous trials on various prosthetic knees had been unsuccessful due to patient's very short residual limb. It was suggested that the C-Leg may be able to overcome the reduced control of a short residual limb [C].
- The C-Leg trial was successful but highlighted areas where the Genium would be more beneficial; for example in Patient 1's job he has to step/walk backwards often and manoeuvre in restricted spaces [A].
- Funding was sought, and received, to upgrade patient 1 to a Genium Knee.
- The Genium trial was successful and the patient received a new prosthesis and gait re-education package

Patient 2

- Underwent a C-Leg trial with a view to finding a prosthesis which would allow her increased mobility and remove the need for a walking aid [D].
- It was hoped the C-Leg would enable the patient to offload her sound side [B] which, due to injuries sustained in a childhood road traffic accident, was becoming excessively painful with her increased activity level.
- The C-leg trial, and improvement in gait from preceding physiotherapy, relieved the pain in patient's sound side and reduced the significant lower back pain the patient had complained of for over 12 months.
- However the trial also highlighted issues with the extensive scar tissue and skin grafting on the patient's residuum which, with increased weight bearing through her residuum and walking with a more natural gait pattern, had begun to breakdown.
- Patient 2 was provided with a C-Leg due to the improved function offered and a new socket interface to try to overcome issues with skin breakdown.
- Patient 2 also received a suitable gait re-education package with her new prosthesis to ensure achievement of maximum function.

Conclusion

I. In conclusion two established amputees were able to highlight areas of their prosthetic provision they were unhappy with and, through a multidisciplinary approach, these issues were addressed and overcome.
   - In both cases the prosthetist and physiotherapist had to work very closely together in order to achieve the best outcomes with regular updates given to the consultant

II. The success of the changes implemented for the two patients discussed also encouraged a change in the review policy for all Wirral Limb Centre patients
   - All established patients who return to the centre with issues regarding function are seen by the prosthetist to remedy prosthetic issues and are given an update on gait technique by the physiotherapist.
   - Primary patients are also seen jointly by prosthetist and physiotherapist at delivery appointments on a more regular basis to ensure a comprehensive handover procedure.
   - There is now a dedicated clinic day for established amputees to return to the limb centre for a short refresher course of gait re-education.

III. Prior to the two experiences discussed in this study there had been no microprocessor knees provided at the Wirral Limb Centre to non-military service users.

IV. The provision of micro-processor knees is a difficult decision due to high cost and intense therapy requirements.
   - The achievements highlighted would not have been possible without the close co-operation of the multi-disciplinary team, particularly joint appointments with the prosthetist and physiotherapist.

V. Following the success of the two experiences discussed it has been possible to identify criteria which highlights patients that may be suitable for a microprocessor knee.
   - Due to financial restrictions it is important to select patients carefully utilising holistic assessment criteria including activity level and activity type, physical and cognitive ability supported by an extensive physiotherapy assessment and examination of prosthetic history.

Acknowledgments

The authors would like to thank both patients for their permission to discuss their experiences and Ken Hurst and Penny Broomhead for their help and support during the trials of C-Leg and Genium.

Sarah would also like to thank all her colleagues at the Wirral Limb Centre for their help and support during the application process and trials.

1 - Prosthetist [BSc(Hons)] ; 2 - Physiotherapist [BSc(Hons)]; 3 - Consultant in Rehabilitation Medicine [MB Bch FRCS].

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Wirral University Teaching Hospital NHS
NHS Foundation Trust

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A reflection on the treatment of a 4½ year old quadrilateral amputee attending Manchester Disablement Services Centre (DSC) for rehabilitation

I aim to give you an over view of this little boys journey, the multi-professional collaboration required, and the difficulties we faced in order to share the lessons we learnt and discuss the plans for his future.

A 14 month old boy was referred to the centre following Meningococcal Septicaemia that was contracted at 9 months old. This resulted in bilateral trans-femoral amputations (one with excessive redundant tissue, the other very short) a right transradial and a partial left hand amputation. We knew this would be challenging particularly as he hadn't learnt to walk prior to having his amputations. He came from a large supportive family with 8 siblings ranging from 3½ - 14 years old; the family employed a part time private carer mainly to assist with therapies and social activities (donkey riding, soft play, swimming and DSC appointments). The community therapy team were already involved and they had provided a baseline of exercises and had begun to look at the home environment.

It was important that time was spent initially getting to know the family and developing their trust in us. It was a lifelong relationship that we were starting and time invested at the very beginning of our professional relationship was time well spent as there were lots of questions such as advising about toys and equipment for home, in addition to how the rehab would progress. There are multiple disciplines involved with complex cases, often 6-7 DSC professionals in addition to all of the community teams. It is crucial to have a key worker to co ordinate all of this care, this can be any member of the team although in this case it was the DSC Occupational Therapist.

The patient's initial care began with stump desensitisation, as a prerequisite for prosthetics; this allowed the team to handle his stumps without any discomfort being caused to him. The importance of non prosthetic independence at this early age can't be stressed enough. Feeding was looked at very early on, allowing him to use cutlery in his left hand. Sitting, floor mobility and transfers were crucial as children spend a lot of time sitting on the floor playing and moving around. He was very top heavy which made this particularly difficult for him. He was abducted at his hips as this was the only way he could gain any sitting balance and it was very difficult for him to get from prone lying to sitting. We started strengthening, core stability and maintaining ROM which is a constant commitment and requires frequent monitoring. Donkey riding and swimming were a great adjunct to therapy (secretly I would have been thrilled to bits if the family had insisted I come along to one of these sessions).

Lower limb prostheses were delivered at 16 months with one piece prostheses suspended with a bilateral TES belt. He was a very active little boy, which came with its challenges; the limbs would often be left at the top of the slide during soft play and kept falling off when rolling around on the floor. The left stump was very short and containment within the socket was problematic. The TES belt was in the workshop on multiple occasions to be re stitched and there were rotational problems with the right prosthesis due to the redundant soft tissue. Locking liners were trialled at this stage unsuccessfully.

At 40 months, due to growth, we were at a point that we could try modular limbs. It meant that adjustments could be made as he progressed in therapy which wasn't possible with the one piece limbs. There were ongoing problems with TES belt rotating and moving, in fact his favourite party trick was to sit down, lean forward and extend his hips to pop his legs out of the sockets which he thought was hilarious- I wasn't convinced that his mum was so impressed. Locking liners were then trialled again and this time it was more successful. He was reviewed regularly by his prosthetist as he grew very quickly and always had a new challenge for us to help him overcome.

We were maintaining ROM which was checked periodically. Static standing was practiced in a variety of situations and games, cruising around plinths, side stepping "like Spider-man" holding walls was ideal for home as it was a large home with gaps between the furniture. He had a k walker which assisted in the early stages of walking, however he would scoot down the corridor with his legs in the air- lots of fun but not moving towards independent walking. We used a balance bike to straddle in walking as his balance improved; he used a gym ball to push down the corridor in addition to a childs push along trolley, a wheeled stool and any other mobile piece of kit we could get our hands on. Facilitation from different parts of the body was used but he would fix with his upper limbs, we even trialled the use of toddler reins. Eventually he walked independently (while chasing a balloon in the gym) it was a very emotional day for everybody that had been involved.

I loved treating this little boy, we had a fantastic time, we laughed lots, played all sorts of crazy games and went on lots

of exciting adventures in our creative play, of course it was all done under the umbrella of professional treatment. It is important to remember that he is still a little boy wanting it get up to all the stuff that little boys do. I quickly learnt that it was better to go with vague session aims and incorporate therapy into whatever he felt like playing that day from being a pirate doing treasure hunts, Bob the builder on a work site, to visiting a fun fair. I was amazed how much "therapy" could be covered playing these games.

Upper limb rehabilitation ran alongside lower limb rehabilitation though we tried to let one or the other take the lead at different times so not to overwhelm the patient and put him off prostheses altogether. Again, non-prosthetic independence was the first priority; being able to pick up food and manipulate toys was paramount. Naturally the child was probably right handed so the first challenge was to change hand dominance to the left partial hand.

Upper limb prosthetic rehabilitation has progressed through 3 different prostheses since the age of 16 months. His first limb was a one piece cosmesis which promoted symmetrical play, and gave length for pushing, pulling, and anchoring toys. This also assisted with lower limb work for balance and allowed him to mobilise in the K Walker. His second upper limb prosthesis was the CAPP device (Child Amputee Prosthetic Program), this is very durable and easy to operate and is ideal for picking up chunky toddler toys such as duplo and bricks as the device has a wide span.

The third prosthesis was a myo-electric prosthesis (MEP) with a flex/extend wrist. Focusing on upper limb sessions was initially difficult as he had recently started nursery and he had just learnt to walk independently therefore sitting down and concentrating was not his priority. With time and maturity this came and he now wears his MEP every day. Sadly he has growth plate damage on his left wrist which may need surgery in the future therefore continuing with prosthetics on the right arm is essential in case this becomes his only functional hand post-operatively.

Throughout his rehab we often had to modify treatments we had used with other children due to his complex needs. He had a bespoke lycra suit made to help his posture, this was successful but contributed to increased sweating and the material made limb suspension even more difficult. This suit was abandoned at the modular limb stage. We also put elastic between his limbs at the top to decrease the abduction on initial mobilisation. This again was successful but my concern was that long term it would increase the strength of the abductors. The elastic ripped on many occasions, it served its purpose but as he improved this again was abandoned.

As he got older we ordered him a wheelchair and helped to secure funding for a car seat. The meningitis trust paid for driving lessons for Mum and more recently a hand propelled tricycle with our support. We needed to get an achievable practical pattern of wearing all 3 limbs whilst settling him into nursery and school with new apprehensive carers and teachers.

The treatment for this little boy is ongoing. As he grows his prosthetic prescriptions will change to suit his needs. I look forward to our next phase of treatment and hope that I can again reflect with the team and feel that we made a real difference.

To summarise the lessons learnt over the last 3½ years:

- Look at prosthetic and non prosthetic goals together; there will always be times when any pt is without their prosthesis
- Start prosthetics early on to gain acceptance
- Move to modular limbs at the earliest opportunity
- Be brave and push the boundaries, you never know your idea might work
- Embrace MDT working and blurring the professional roles
- Regularly review children as prosthetic fit and developmental milestones can change monthly
- Children need to enjoy themselves in therapy as the therapeutic relationship you form with them could be lifelong and childhood experiences are precious

Sarah Bradbury - Clinical Specialist Physiotherapist(Manchester DSC)

With thanks to Jane McLaughlin (specialist OT) and Steve Purcell (Senior Prosthetist) who co-wrote the presentation for the OpCare scientific conference and poster presentation at BACPAR and ISPO

University Hospital of South Manchester NHS
NHS Foundation Trust

A case study profiling the progress of a quadrilateral preschool amputee

Sarah Bradbury (Clinical Specialist Physiotherapist), **Jane McLaughlin** (Specialist Occupational Therapist), **Steve Purcell** (Senior Prosthetist), **Prof. Jai Kulkarni** (Consultant in Rehabilitation Medicine).
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Introduction

This case study presents the highly complex case of Raphael a quadrilateral preschool amputee attending Manchester Disablement Services Centre (DSC) for Rehabilitation, both with and without prostheses.

We aim to give an over view of his journey, the multi-professional collaboration required, and the difficulties faced; in order to share the lessons learnt and discuss the plans for his future.

Raphael is 4-years-old and had his amputations following Meningococcal Septicaemia aged 9 months. His amputation levels were:

- right trans femoral (with excess redundant tissue),
- left trans femoral (very short),
- right trans radial (mid 1/3),
- left partial hand (digits 1-5 at the proximal interphalangeal joint).

Therapy Challenges

- Therapy sessions had to be spontaneous, fun, play focused and very patient lead due to his age.
- Be respectful of a baby's normal needs e.g. sleeps, hunger, tolerance for engaging in therapy, free play time and not allow his life to be taken over by professionals.
- Upper limb prosthesis sometimes hampered and sometimes helped with lower limb progress and general independence – be realistic.
- Lycra body suit helped posture and retain redundant tissue but hindered prosthetic suspension, potty training and caused sweating.
- Coordinating extensive therapy input from lower limb and upper limb team to ensure the patient was seen by everyone but didn't tire.

Prosthetic challenges

- Deficiencies of all 4 limbs.
- Bilateral trans femoral – one side very short, the other with distal redundant soft tissue, scar tissue on both sides.
- Casting – due to age and multiple amputations.
- Achieving and maintaining optimum socket fit, suspension, length, and alignment.
- Lycra body suit leading to fit and suspension issues.
- Growth spurts – regular review to avoid periods of none limb wearing.
- Donning/doffing limbs – assistance needed due to age and upper limb deficiencies.
- Minimising weight of all three prosthetic limbs to reduce energy expenditure.

Social Challenges

- Limbs falling off in play due to high activity levels.
- Moving and handling practicalities for parents.
- Adapted car seat- grant needed.
- Fear and lack of confidence from others.
- Access to nursery via multiple steps and very steep slopes.
- Nursery initially reluctant to have patient without prostheses on therefore frequently sent home following toilet training accidents.
- Moving classrooms each year with new environmental issues.

Past Physio Treatment

- Maintaining hip extension.
- Strengthening hip extensors, adductors and abductors.
- Strengthening trunk extensors.
- Extensive core work.
- Floor mobility.
- All transfers both with and without prostheses.

Past Prosthetic Treatment

- Trans femoral limbs provided from age 16 months – exoskeletal style difficult to adjust fit, length and alignment once manufactured. Difficulties with soft suspension particularly on the shorter side (bilateral elasticated soft suspension belt).
- One-piece trans radial cosmetic arm provided for right side. Left upper limb more functional without prosthesis due to distal nature of amputation.
- Child Amputee Prosthetics Project (CAPP) upper limb provided from age 29 months as 1st functional prosthesis.

Past Occupational Therapy Treatment

- Scar management, desensitisation, family support, referral to Meningitis Trust.
- Non-prosthetic independence- feeding, floor mobility, play.
- Home and nursery visits, case conferences/key working
- Establishing practical, achievable wearing pattern and integration of all 3 prostheses.
- Potty training, wheelchair provision, suitable equipment and toys for home and nursery.
- Assessment, prescription and training with right upper limb prostheses (one-piece cosmesis and CAPP).

Present Physio Treatment

- Static standing work.
- Side stepping with and without equipment- cruising and hands on wall.
- Mobilising with facilitation at ribs/pelvis/shoulders/wrist/hand.
- Mobilising with equipment and decreasing its support over time.
- Joint working and advice to nursery staff and community therapy teams.
- Use of K walker, push along trolley, gym ball, wheeled stool, balance bike.

All therapy sessions involved a lot of play, enthusiasm and imagination.

Present Prosthetic Treatment

- Introduction of modular lower limbs from age 40 months to facilitate on-going adjustments to sockets, length, and alignment as gait develops, maintaining elasticated soft suspension belt.
- Moving to a second pair of modular lower limbs with silicone locking liners to provide improved suspension at age 46 months – whilst immediate improvements in suspension were noted, the absence of the suspension belt has resulted in rotational issues between the sockets and liners.
- Provision of myoelectric upper limb prosthesis for right side also at 46 months.

Present Occupational Therapy Treatment

- Changing hand dominance from right to left hand.
- Fine motor skills training with left partial hand.
- Car seat grant application.
- Assessment and training with right myo-electric prosthesis.
- School visits: educating teachers on how to work with prostheses.
- Aiming for independent toileting and dressing.

Conclusion

- **Achieve a basic level of non-prosthetic independence urgently.**
- **Introduce prostheses early to improve acceptance.**
- **Work on non-prosthetic and prosthetic goals together as both will always be required and needs change rapidly in one so young.**
- **Move to modular lower limbs at the earliest opportunity to provide ease of adjustment.**
- **Avoid periods of non prosthetic use and ensure regular reviews.**
- **Co-ordinated approach by a skilled experienced team and be flexible within traditional therapy roles.**
- **Be brave and push the boundaries.**
- **The support, collaboration, commitment and sheer determination from the patient's family and his professional carer who worked with us every step of the way made our input successful.**

Raphael's Future

- **Introduction of articulating prosthetic knee joints at the appropriate times.**
- **Achieve age appropriate milestones: personal care, donning/doffing, riding a bike, showering, cutting own food.**
- **Next generation myoelectric upper limb with wrist rotator.**
- **Encourage and assist with hobbies and lifestyle requirements as they develop.**
- **Maintain excellent team approach.**
- **Growth plate damage in left wrist- deterioration could change the clinical picture again.**
- **Possible revision surgery.**

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UHSM

BACPAR Membership Survey Report 2013

It was agreed at the Executive committee meeting in March 2013 that BACPAR would ask some important questions of its current and past members in its 20th Anniversary year.

One month's subscription to Survey Expression was purchased at a cost of $40 (£24.46). The survey was developed by the Executive Committee and a link to the survey was placed on Amputee Rehabilitation iCSP and members were emailed the link in October 2013. At the time of the survey the BACPAR membership was:

Membership Category*	
Full	132 (includes 4 international that have maintained their CSP membership)
Support Workers	Full membership includes 2 support workers with CSP membership
Departmental	15 (includes 1 international)
Allied associate	15 (includes 6 international)
Student	Allied associate includes 2 students
Total	162

*For further information about BACPAR membership categories see http://bacpar.csp.org.uk/join-us
This report outlines the results of the survey and where appropriate comparative results from the last survey in 2003 are shown. In 2003 there were 150 members.

	2013	2003
Number of surveys completed	80 * 100 surveys were started – the results of all are used in the survey results report.	Members 41 * a further 18 were returned after the survey close date and therefore not included in the results published in BACPAR Journal Spring 2004. The survey was sent to each of 150 members Non-members 37 The survey was sent to 54 Ex Members

Member vs non-member returns	% of returns 2013	% of returns 2003
Member	80	52
Non Member	20	48

Membership categories of respondents in 2013	Number	%	In 2003 83% of survey respondents were Full members 15% were Departmental members
Full	62	83	
Departmental	10	13	
Allied Associates	3	4	

How long have you held membership of BACPAR? (% of current members)

Joined this year	27
1-2 years	16
3-5 years	15
5-10 years	16
10 years +	25

What BACPAR region do you belong to?

Region	Percentage of current members in survey respondents
North West/Mersey	9
Trent	4
West Midlands	11
North Thames	7
Yorkshire	8
East Anglia	7
Wessex (now South Central)	5
South Thames	19
Oxford (now South Central)	5
South West	5
Ireland	3
Wales	4
Scotland	7
International	6

How often do you participate in meetings or training organised by your BACPAR regional representative? (%)

Regularly	28	In 2003 70 % of respondents stated that they attended BACPAR regional study days
Sometimes	13	
Occasionally	34	
Never	25	

How important do you consider the training and meetings organised by the BACPAR regional representatives are as part of your CPD? (%)

Very	51
Somewhat	36
Not very	1
Not at all	1

What was your main reason for joining BACPAR? (% Respondents selected up to 3 reasons)

Awareness of amputee rehabilitation	20
Awareness of amputee related policies and initiatives	14
BACPAR run conferences and study days	21
BACPAR Journal	7
Access to newly published guidance and guidelines	14
Part of my KSF/PDP/Job role requirements	6
BACPAR discount on conference and study days	3
My Department's departmental membership	1
Peer support	11

BACPAR sends most of its mailings out electronically. What is your preference for mailings/receiving information from BACPAR?

BACPAR membership emails to be sent out weekly	24
BACPAR information in the iCSP/BACPAR bulletin (fortnightly)	26
BACPAR membership emails to be sent out monthly	34
I would prefer to get all my information from the BACPAR website/Amputee iCSP rather than emails	3
I do not like electronic communication and prefer paper copies of information	1
I have no preference for mailings	12

We would like your opinion on the twice yearly BACPAR journal. Respondents were asked to tick as many statements as they agreed with. Statements that did not receive any agreement are omitted from the list below.

BACPAR Journal always has articles that are relevant to Amputee rehabilitation and Physiotherapy	24
BACPAR Journal keeps me up to date	17
BACPAR Journal is an important part of my subscription	17
I think 2 editions of the Journal is just about right	20
I would prefer more editions of the BACPAR Journal	5
I would prefer only to receive an electronic version of the BACPAR Journal	3
I would like a hard copy and an electronic copy of the BACPAR journal.	8
I have never read the BACPAR Journal	1 respondent
I would prefer the BACPAR Journal to be more research focused.	5

How often do you access the SAGE articles when they are added to the BACPAR website? (%)

Every time one is added to the BACPAR website	17
Sometimes	62
Never	21

Having read the SAGE articles, how often do you use them in your clinical practice? (%)

To keep up to date with the current evidence base in Amputee rehabilitation	50
To discuss the findings of the article with peers in Journal Clubs/Peer review sessions	22
To implement the findings of the articles in my current practice	26
To ensure the service is providing care based on current evidence	1

For those that were not current paid up members of BACPAR- When did you last hold a BACPAR membership? (%)

1-2 years ago	47
2-3 years ago	40
3-5 years ago	0
5 plus years ago	13

What AFC band are you? (%)

5	6
6	24
7	47
8	7
Not appropriate	16

What percentage of your time do you work in Amputee Rehabilitation? (%)

Not currently working in amputee rehabilitation	9
1-25	19
26-50	21
51-75	11
76-99	7
100	33

Are you a member of any other group/network associated with Amputee or Prosthetic rehabilitation? (%)

No	73	In 2003 61% of the respondents reported that they were NOT part of another Clinical Interest Group
ISPO	13	
WCPT AR	3	
SPARG	6	
SIGAM	1	
BSRM	1	
IRPAG	1	
ADAPT	1	

What does the other group or network offer instead of or in addition to BACPAR?

- A different emphasis
- International networking
- ADAPT addresses working in international development
- ISPO is the preferred membership for a Prosthetist (alongside BAPO)
- Multi-disciplinary perspective
- Audit/National database.

Have you ever taken part in or contributed to any BACPAR events or activities? (% respondents were asked to select all that apply)

I have attended a BACPAR study day	25
I have attended a BACPAR conference	21
I have contributed to a discussion on amputee rehabilitation iCSP	19
I have contributed to a SAGE article discussion on the BACPAR website	2
I have been a committee member or regional representative	9
I have contributed to a BACPAR Journal	10
I have been part of a working party to develop guidance and guidelines	8

Have you attended a specific meeting or participated in a working party on behalf of BACPAR in the last two years? (%)

Yes	20
No	80

How well did you feel BACPAR supported you (e.g. expenses/information) in your attendance at a meeting or participation in a working party on behalf of BACPAR? (%)

Very well	59
Well	29
Partially	6

If you are not a current BACPAR Executive committee or sub-committee member, would you be interested in becoming a committee or sub-committee working group member? (%)

Yes	20
No	80

The BACPAR website was redesigned in 2011. It is regularly updated and is now the main storage site for documents relating to BACPAR, its functions, stakeholders etc. Please let us know how you have used the website (%)

I have visited the website to get information about BACPAR	75
I have visited the website but have not be able to find the information I was looking for	10
I have visited the website for interest only	7
I have not visited the website	7
I didn't know BACPAR had a website	1

In the last two years BACPAR has undertaken or been involved in various activities on behalf of the BACPAR membership. Please highlight which activities that you were aware of from the list and indicate up to 5 of the activities which you feel are the most important that BACPAR has been or is involved in (to the nearest 0.5%)

Item	% aware of this item	% believe it is a priority
Publication of updated EB Guidelines Physiotherapy Management of Adults with LL Prostheses	6	17
Publication of MDT Guidance Mgt of Post Op Residuum Oedema in LLA	4.5	6
Updating the BACPAR Outcome Measure Toolbox	5.5	11
Updating the resources to support Research, Audit and Critical appraisal document	1.5	2
Updating the EB Clinical Guidelines for Pre and Post op Physiotherapy-Adults with LLA	5.5	12
Attendance at APLLG meetings	3	2
Participation in NCEPOD project re amputation surgery	1.5	0.5
Participation in Professional network meetings at and with the CSP	3.5	2
The provision of Bursaries to Full members	3	1
The provision of additional bursary funds to support BACPAR members' attendance at International Conferences	3	0
Provision of financial support to SPARG for the publication of the 2011 SPARG report	2	0.5
Scoping work to publish an update of Therapy for Amputees	2	2
Support to the membership in the development of the Paediatric prosthetic Guidelines	1.5	0.5
Collecting information re research and audit in Amputee rehabilitation	3	2.5
Project to review M Level post grad training in Amputee rehabilitation	3.5	1
Development of a research bursary to support research in amputee rehabilitation	1.5	1
Supporting the development of a World Confederation Physical Therapy amputee rehabilitation network	2	1
Liaison with the CSP re research priorities that include Amputee rehabilitation	2	2
Planning an annual conference	4.5	7.5
Participation in the review and development of documents to support NHS England commissioning of the assessment for and provision of prosthetics.	3	4.5
Facilitating Amputee Rehabilitation iCSP pages	5	3.5
Purchase of SAGE articles regarding Amputee rehabilitation for BACPAR members' access and discussion	3.5	1
Publication of updated guidance for the education of Pre-registration Physiotherapy students	3.5	1.5
Publication of updated BACPAR Bibliography	2.5	0.5
Publication of twice yearly BACPAR Journal	5.5	5.5
Collaboration with ISPO and BAPO in the organisation of the 2012 Conference.	4	1.5
Run regional study days	4.5	6
Provide a venue for the annual Regional Representative meeting	1.5	0
Publication of a Service Portfolio	1	0
Publication of the Risks to the Contralateral Foot of the LLA Guidance	4.5	1

Suggestions for any other activities that you feel BACPAR should be involved in.

- Defending the downgrading of Physiotherapists who specialise in Amputee rehabilitation. Monitoring the effect of down banding.
- Additional guidance for non-prosthetic users and for high activity users- including outcome measures for these patients.
- As much research as we can be involved in to support the evidence base
- Education of other professionals about amputee rehabilitation
- Looking at the NICE Guidelines with regard to the treatment of patients with PVD prior to amputation.

To what level do you think BACPAR membership offers value for money? (%)

Very good	57	In 2003 95% of respondents reported that BACPAR was good value for money
Good	36	
Partial	2	
Poor	1	

Thank you to all those who took the time to complete the survey.

The survey results and comments received will be reviewed by the Executive Committee at the meeting in March 2014. The action plan from which will be incorporated into the BACPAR work plans from 2014-2017.

If you have any queries or comments about the questionnaire please email me at Louise.Tisdale@nhs.net

Louise Tisdale - On behalf of the BACPAR Executive Committee

BACPAR Study Day – Clinical Management in Acute Amputee Rehabilitation

Course Presenters:

Kate Primett, Specialist Amputee Physiotherapist, Royal Free Hospital

Catherine Wilkinson, Senior Amputee and Vascular Occupational Therapist, Royal Free Hospital

Alexia Diggins, Senior Physiotherapist, Royal Free Hospital

Andrew Carey, Vascular and Amputee Rehabilitation Assistant, Royal Free Hospital

Sheena Cunnane, Senior Occupational Therapist, Royal Free Hospital

Sean Matheiken, Vascular Consultant, Royal Free Hospital

Denise McGarvey, Pain Clinical Nurse Specialist, Royal Free Hospital

Richard Leigh, Clinical Specialist Podiatrist, Royal Free Hospital

Amanda Cannell, Tissue Viability Nurse, Royal Free Hospital

Lucy Gate, Clinical Psychologist, Wellness Team, Royal Free Hospital

North Thames regional BACPAR representative Kate Primett joined forces with the vascular and amputee team at the Royal Free Hospital to present an overview of acute management in amputee rehabilitation. A very popular course which ended up being much oversubscribed provided an excellent and informative insight into a variety of issues surrounding the acute management of amputee patients.

The day was aimed at therapists working in amputee rehabilitation and was attended largely by physiotherapists, with a smaller number of occupational therapists and rehabilitation assistants in attendance. The presentations and practical sessions covered topics relevant for all of these roles with presentations from a number of different health professionals.

The morning session was divided into short presentations, with Sean Matheiken giving the vascular surgeon's view on amputations, also discussing the role of therapists and the efforts the team has made to forge close links between therapists and medical staff. Sean also discussed revascularisation and the role of the multi-disciplinary team in avoiding amputation. Following this came talks on pain management, wound management, and an introduction into diabetes and how it can affect the lower limb. This was particularly relevant given the important role the MDT has, as Sean touched on at the start of the day.

Kate Primett demonstrating amputee exercises

Following this, Lucy Gate, psychologist at the RFH presented on how health professionals can attempt to bring about behaviour change and promote health. Given the effect lifestyle choices have on this group of patients this seemed a particularly relevant subject. Lucy had been involved in research for the DoH and spoke on how we can all be motivated towards certain behaviours and how we can bring into our own practice strategies for initiating change and giving patient's 'the opportunity to change'. To me this was particularly interesting, as therapists we spend a lot of time with patients and seem well placed to deliver these strategies, the psychological approach is not something I have experienced much teaching on and so found this a valuable insight into the subject.

The final presentation of the morning was from course organisers Kate Primett, and Catherine Wilkinson, who gave a whistle-stop tour of physiotherapy and occupational therapy pre and post amputation. Interesting concepts were discussed, including, the development of a pre-op assessment form for amputee patients which is filled in by the therapy staff and vascular doctors to aid the decision making of the surgeon. Given the

Catherine Wilkinson's practical session on wheelchair instruction

The use of PPAM Aid for early mobility demonstrated by Andrew Carey

Further wheelchair instruction

large amount of information covered it may have been useful to spend a little more time on the subject in order to allow all of their wisdom to be imparted on us listening.

Following an Ossur supplied lunch the attendees were divided into 5 groups and spread around 2 rooms dotted with various bits of equipment and the odd amputee patient. The afternoon was looking at more practical elements of amputee management. The 5 stations included exercise prescription, PPam aid intervention, Femurett intervention, patient transfers and wheelchair instruction. Each group had 20 minutes to spend with a presenter, the relevant equipment and on 4 of the stations a very willing patient. Particularly interesting for me was the opportunity to get my eyes on the early walking aids, and it was great to see patients using these. Kate Primett's section on exercise prescription was also very valuable and provided great insight; I personally would have relished the opportunity to spend more time looking at this aspect of amputee management.

The second tea break of the day provided a short pause before we embarked on gait analysis, the final session of the day. Alexia Diggins presented on 'normal' gait before we were split in 2 groups. One group stayed to analyse videos of amputee patients mobilising with early walking aids while the other group watched 2 live amputee patients mobilising using their own prosthetic limbs. It made the theory much more relevant to have patients present and really added to the value of the session. The analysis was completed as a group and so it was great to hear the thoughts of others and band ideas around.

The course seemed well received and covered particularly interesting and relevant topics however I am able to make some suggestions for future days. The course covered areas which I feel would have benefited from having more time, this only reflects the fact that the speakers had so much valuable information, and at times it would have been great to expand on this. The space was also a little confined and the organisers spoke about acquiring a larger room in order to make things a little more comfortable next time.

Sam Kyffin - Senior Physiotherapist Royal Free London Hospital

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A Worldwide Network for Amputee Rehabilitation. The story so far...

In late 2012 I had the idea of starting a worldwide network for Physiotherapists (and other professionals) working in amputee rehabilitation. With the aim of widening the sharing of good practice and peer support which UK Physios already benefit through BACPAR/SPARG and the Amputee rehabilitation iCSP site.

Having gained the support of BACPAR to do this, I contacted Tracy Bury the WCPT Director Professional Policy regarding how this could be achieved. I became aware of the WCPT networks and sub groups at a meeting I had attended at the CSP. There were already, for example, WCPT networks established in Pain management and for Physical Therapist Educators. WCPT subgroups are bigger more organised and structured organisations so it was felt that a network would suit our needs.

I was asked to establish what the level of interest would be in the network, and using international contacts that BACPAR already had- emails were sent introducing the idea to amputee rehabilitation Physiotherapists around the world. Having generated some interest the WCPT were updated and I was then asked to find potential leaders/network facilitators- representatives of amputee rehabilitation from member organisations of the WCPT. Fortunately very credible and supportive individuals came forward from within those that had already shown interest in being a member of the network

- Helen Scott – Glasgow - UK
- Alexandre Coelho – Lisbon - Portugal
- Heather Curtis – Melbourne - Australia
- Kajsa Lindberg – Copenhagen - Denmark

The newly formed group of facilitators agreed the aims of the network:

- To encourage, promote and facilitate the interchange of ideas, research, knowledge and skills in amputee rehabilitation for education and practice
- Sharing clinical guidelines
- Discussing and promoting the use of outcome measures
- Support pre-registration education
- To develop post registration education in amputee rehabilitation
- To provide support and information between members of the network

These were shared with the WCPT and the network was approved in July 2013.

A homepage was set up for the WCPT Amputee rehabilitation (AR) network at http://wcpt.org/ar and having gained the required permissions- links to amputee rehabilitation resources were added. A LinkedIn network has been set up for network members to use to share ideas, ask questions and communicate with each other and the network was formally launched in October. Interested individuals are asked to register on LinkedIn, if not already registered and then submit a request to join the AR group at http://www.linkedin.com/groups/WCPT-Network-Amputee-Rehabilitation-AR-5140337/about

To date (Feb 2014) the network has 45 members from; Australia, Canada, Denmark, Egypt, Eire, Ethiopia ,India, Malta, New Zealand, Norway, Portugal, Saudi Arabia, Serbia, South Africa, Spain, Sri Lanka, Sweden, UK, USA, and members of the International Committee of the Red Cross.

There will be an amputee rehabilitation symposium at the World Congress in Singapore 1st- 5th May 2015 in Singapore (to take a look use the link http://www.wcpt.org/congress/fs/69) where we hope there will be a gathering of WCPT AR members.

We also hope to have a get together at ISPO Lyon in 2015 at what we hope will be our first full face to face meeting.

Louise Tisdale - Wolverhampton Louise.Tisdale@nhs.net

Opcare scientific meeting review

On the 25th of October I attended the Opcare annual scientific meeting in Oxford. This is a conference for opcare employees to present any research or case studies they have been working on over the last year. After a brief introduction and a few announcements the conference kicked off with a presentation on the use of the Edinburgh visual gait scale to evaluate AFOs in post stroke hemiplegia by Simon Lalor. This was a good comparison of the clinical use of different forms of gait analysis. It highlighted that although very effective, 3D gait analysis is not always practical and that visual analysis reports can vary hugely between clinicians. This is where the Edinburgh visual gait scale comes in as it allows a clinician to score various aspects of the gait based on specific guidelines to produce a score for the patients gait. Silicon coach analysis software can be used to help determine the patients score by using cameras to film the patients gait in the sagital and coronal planes which can then be watched and analysed using the software to calculate various angles and step lengths etc. The Edinburgh visual gait scale is a useful tool as it takes 25 minutes to produce a score which can then be used to determine treatment outcomes.

The second presentation was on a case study of a quadrilateral preschool amputee who had lost his limbs due to meningitis. He was a bilateral transfemoral amputee with a right transradial and left partial hand amputation. It was fascinating to hear how they approached teaching him how to walk and introduced him to the prosthesis. There was a huge emphasis on MDT working to get the best possible outcome for the child. There was also a lot of emphasis on making therapy into a play experience and as enjoyable as possible for the child so that they are happy to return for treatment and will get the most out of their prosthesis.

After a short coffee break there was a session on a course about the fundamentals of research, how to form a research question and analyse research papers. This was relevant to me as I am a student and will be having to write my dissertation soon but it didn't really go into much detail as it was a course overview. Following this Gavin Campbell and Andrew Reece reported back from their trip to the American Orthotic and Prosthetic Academy conference in Florida. They said it was an interesting trip and there was lots about new components such as the genium knee and the proprio foot ankle as well as some research information on the high fidelity socket which utilises osseosynchronization.

Lunch was followed by a presentation on post op satisfaction of elective amputees. Although the study only contained 9 people, 3 of which dropped out, it was interesting that all the patients gained benefits from the amputations and that their psychological health had improved 3-6 months following the amputation. It would be nice to see a further follow up a year down the line to find out how they were coping.

The next presentation was on evaluating AFOs using a clinically applicable outcome measure in post stroke hemiplegia. The Edinburgh visual gait scale was used to quantify the difference in the patients gait with and without an AFO. Videos were used to show the differences with and without an AFO and there was a huge visible improvement when the patient was wearing an AFO. This improvement can now be quantified to justify the use of AFOs in patients with post stroke hemiplegia.

The final presentation was on swift wick socks and the new omega software and scanner. The swift wick sock is for reducing perspiration beneath a liner. It is good for patients who participate in sports and are transtibial but currently the socks are only available in very specific sizes and only for transtibial patients. A new white light scanner has been developed to scan a 3d image of a patients stump. Dominic Hannet, from opcare, tried to demonstrate the scanner but could not get it to work for the presentation which was a shame as I have not seen one being used before. However the omega software for rectifying the casts looked very impressive and customiseable for what you want to do. Having never used a 3d computer system for rectifying casts I am not sure how easy it would be to pick up.

I thoroughly enjoyed the conference. As a student it was good to see the company as a whole and not just the people you work with every day. The presentations were all interesting and it was nice that they were all relatively small studies which had information relative to most clinics with outcomes that could be implemented without too much difficulty.

Kirsty Green- Student Prosthetist

SPARG REPORT

BACPAR's financial aid

In October last year the BACPAR executive committee agreed to give SPARG £2,652.00 to support the production of the 2011 Annual Report. Then, following a vote at the BACPAR AGM in November a further £3,720.00 was given. This was to allow SPARG to purchase a new server with operating system, upgrade the application and data base software and transfer application and data to new server.

How has the money been used?

The 2011 Annual Report is being finalised. All BACPAR members will receive an electronic version. The report follows the usual format with the addition of a definition of each centre's model of care. This is the result of a project SPARG members have been working on in an effort to agree key aspects of service delivery in Scotland that appear to influence rehabilitation outcome for lower limb amputees.

The new server has been purchased and the data analyst is working on upgrading the data base. Once this is completed the server will be re-sited to Caledonian University whose IT department have agreed to support the maintenance and security costs of housing the server thus reducing SPARG's monthly outgoings. The renewing of the server and re-siting it means the project becomes more sustainable and benefits from the academic support of the Physiotherapy Department. Some limitations within the current reporting facility are being solved and there is potential to expand the collection of outcome measurement (OM) data.

Next steps - Expand collection of OM data

At the last meeting in October SPARG members have agreed in principle to expand the data set to include the outcome measurement tools recommended by BACPAR OM sub-group when it has finished its current review. Specialist centres have agreed that it is feasible to collect this additional information.

What does this mean for BACPAR members?

BACPAR can be set up to input data using the SPARG web-based data base if they so wish. Patients would be issued with a BACPAR number as apposed to SPARG number. BACPAR members can agree to use all or part of the data set. This data would be owned by a BACPAR data controller and SPARG would not have access to it without prior arrangement. Further discussions are planned between SPARG and BACPAR as there will be a cost to expanding data base and a recurrent cost for data collation and annual report.

Why start collecting the data and using this system?

The SPARG data collection project has evolved over the past 20 years. It has been a labour of love benefitting from the expertise of many committed and experienced specialist amputee physiotherapists in consultation with multidisciplinary colleagues. It is there to be used. There is, at the moment, an amazing opportunity to start comparing outcomes across the border and learning more from each other's practice.

Whats in it for your service?

You can report your own data as soon as it is inputted into the web based data base. You can use the reporting facility to cross check your data and analyse it to generate over 30 different reports, for example, how quickly are patients starting compression therapy and getting up on an early walking aid, how many are limb fitted, what is the 30 day mortality rate, how well do those who are limb fitted walk (LCI 5)?
You can compare your service outcomes to those of other centres across the country.

Summary

An opportunity exists for SPARG and BACPAR to join forces to compare outcomes across the border.
The benefits for BACPAR: benchmarking against Scottish Services with defined models of care, ready to use data collection tool and software with a local data analysis facility.
The benefits for SPARG: benchmarking against English services and improved financial security.

Helen Scott - SPARG

Kate Lancaster, Physiotherapist - Queen Mary's Hospital, Roehampton

St George's Healthcare NHS
NHS Trust

Falls Prevention for Lower Limb Amputees using a Balance Circuit Group

Introduction

There are many reasons why people fall later in life – medications, footwear, eyesight, uneven paving, weakness, medical conditions, etc. Often it is a combination of factors that lead to a fall. 35-50% of adults over 65 fall. This rises to over 45% for people over 80 (Department of Health 2009). Lower limb amputees (LLA) fall more than age matched, able bodied individuals (Miller et al 2001 & 2003). Gait & balance impairments as a result of amputation or ageing are major risk factors for falls (Mian et al 2007). The cost of falls to the NHS (Eng & Wales) is around £15.2 million per year. The consequences of falling include minor injuries, fractures, increased fear of falling, reduced mobility & confidence, social isolation, increased dependency and even death. In LLAs falls can also damage prostheses, require revision of stumps to higher levels and lead to increased length of stay in hospital (BACPAR 2008).

What Exercises?

A multifactoral approach is often required in the treatment of falls. The most effective component of this intervention is therapeutic exercise, as balance impairment and muscle weakness caused by ageing and disuse are the most prevalent, modifiable risk factors for falls (Department of Health 2009).

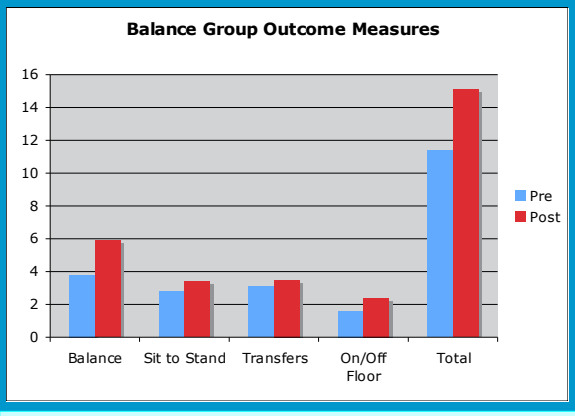
Research into effective exercise in preventing falls in older people has shown that programmes such as Otago or FaME can reduce the risk of falls by up to 54%. (Cochrane review 2012).

Falls prevention exercise needs to be individually tailored. It should focus on lower limb strengthening, challenging balance and be progressive to be effective. Exercises need to be performed regularly (ideally 2-3x per week) to maintain a level of strength and balance. If doing a weekly exercise class then additional 'prescribed' exercises should be carried out through the week. A 'dose' of 50 hours is thought to be required to reduce risk of falls.

Statistics and Group Development…

For older people, TUAG >15secs = increased risk of falling, but there are no equivalent statistics from outcome measures that can be used to predict an increased risk of falls in LLAs. At Roehampton when we assess our patients at discharge, 6/52 and 6/12 post discharge, not only do we collect TUAG, but we investigate falls and fear of falling.

There is no consensus of treatment in falls prevention for LLAs. Therefore at Roehampton, we decided to develop a circuit style exercise group targeting strength and balance, based on Otago, adding alternative exercises for single and bilateral amputees who may not be ready or have prostheses. An outcome measure was needed that was inclusive of our range of patients in terms of prosthetic user or not and whether they were a single or bilateral amputee. It also needed to measure change from pre to post prosthetic fitting. At Roehampton, we developed an outcome measure using aspects of the Berg Balance and Ampro, creating four sections - Balance, Sit to Stand, Transfers and getting off the floor. All patients are assessed pre and post completion of the group.



So Far …

At present the class has been run weekly since February 2013. for both our in and outpatients. Class numbers vary between 7 - 13 patients and have needed 1 member of staff for every 2 patients- to supervise the on/ off floor station, the plinth exercises and the exercises in the parallel bars. Somebody also needs to be the timekeeper and general motivator! The class runs for around 60 mins with a warm up and warm down and then 2 minutes per station. Our statistics are showing an improvement in all sections of the outcome measure between pre class and discharge. Feedback from the patients has been positive: "a good change in routine", "challenging for both prosthetic and non prosthetic users" and "enjoyable"!

The Future …

Our intention is to continue to collect the outcome measures for the class and evaluate if the group has reduced the incidence of falls whilst patients are receiving their current treatment. Our other goal is to see if a prediction limit can be made with the TUAG which is amputee specific by comparing the data we have gathered at discharge, 6/52 and 6/12 post discharge.

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Guy's and St Thomas' NHS
NHS Foundation Trust

Welcome to a new....

Amputee Rehabilitation Unit (ARU)

Above, left to right: Jonathan Corbett - Amputee Rehabilitation Assistant, Jodie Georgiou - Highly Specialist Amputee Physiotherapist, Claire Rutherford - Highly Specialist Amputee Occupational Therapist, Maria Manock - Specialist Amputee Physiotherapist, Claire Skingeley - Occupational Therapist, Adam Letts - Amputee Rehabilitation Assistant.

The Amputee Rehabilitation Unit (ARU) opened to patients in June 2013. This new purpose built, 12 bedded amputee inpatient rehabilitation unit is based at Monkton Street Rehabilitation Unit, Kennington, London.

This stand alone building also hosts Lambeth Podiatry and Acupuncture Services. As a Guy's & St Thomas' Community Rehabilitation Unit the team works closely along side Acute Vascular Services at St Thomas' Hospital (vascular hub south east London/Kent), and Bowley Close Rehabilitation Centre (Crystal Palace limb fitting centre).

The team is lead by a Consultant in Rehabilitation Medicine, with medical management by a Consultant in Geriatric Medicine. The multi-disciplinary team consists of nurses/HCAs lead by Sister Patricia Willis, 3 Physiotherapists lead by Jodie Georgiou, 2 Occupational Therapists lead by Claire Rutherford and 2 Rehabilitation Assistants. A visiting Prosthetist provides prosthetic input two days per week from Bowley Close Rehabilitation Centre. The ARU also benefits from a visiting Amputee Counsellor, Vascular Nurse Specialist and Podiatrist weekly.

The Unit has 8 beds for Kings Health Partners (GSTT and KCH), and 4 beds for external referrals. The Unit offers a package of amputee rehabilitation for up to 7 weeks. Those patients needing a longer period of rehabilitation are assessed on case by case bases through their time at the ARU. The ARU accepts patients for prosthetic and non prosthetic rehabilitation, and operates a prioritisation protocol when screening and accepting referrals.

The ARU was pleased to welcome Scott Moorhouse, Paralympic Javelin Athlete, London 2012, to formally open the ARU on the 8th November 2013.

Scott met past and present patients including Steven Onasanya (right), one of the ARUs first patients who underwent bilateral trans-tibial and digit amputations.

Scott said "For me, sport was my rehabilitation. I have never had the use of my leg so from the start I just got up and got on with it, but after visiting Headley Court I can see just how vital the Amputee Rehabilitation Unit at the Monkton Street Rehabilitation Centre is".

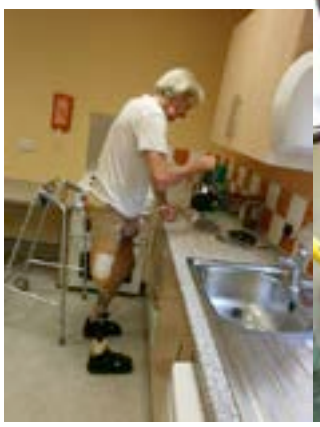
Angela McCrae, Head of Regional Rehabilitation Services, GSTT said "When patients come to us they are at the very beginning of their journey. We help them to learn all the skills that they need to live as an amputee…. With our help patients are able to adjust to the loss of a limb in a bright, comfortable and healing environment."

The Environment

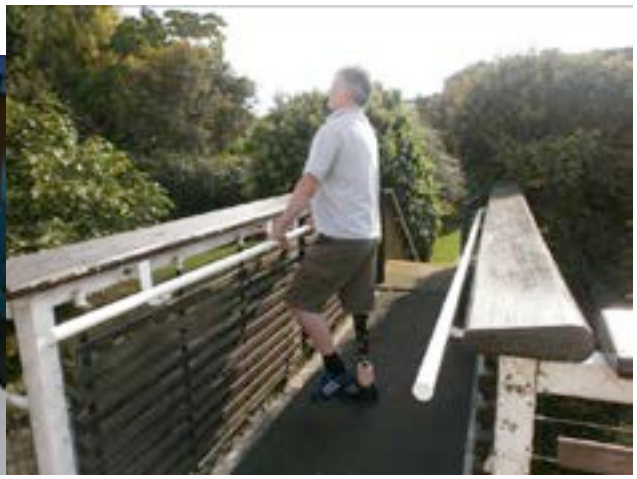
Newly purpose built 12 bedded ward, patient balcony's, patient communal dinning room, family area, large rehabilitation garden and amputee gym facility.


Therapy: At the ARU patients are seen for therapy 6 days per week, at least twice per day. A range of rehabilitation strategies are used including: Individual therapy sessions, exercise classes, breakfast group and cooking group, relaxation class, falls education class and gardening. The unit operates an enabling care ethos with nurses and HCAs contributing to the rehabilitation model on the ward.

The ARU also operates an Open Wound Protocol.







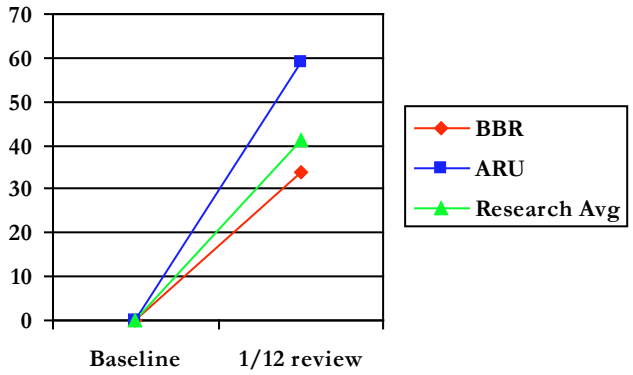
Outcome Measures: At the ARU physiotherapy outcome measures used for prosthetic users are: SIGAM, Socket Comfort Score, Two Minute Walk Test, Timed Up and Go and the LCI-5. For non limb users: Timed Stand and Sit to stands in 60sec. Occupational Therapy Outcome measures used are: COPM, Barthel and AMPs. Initial outcome measure results demonstrate the importance of intensive inpatient rehabilitation by staff with specialist amputee knowledge and skills. Below shows outcome measures results in 2011-12 for those primary amputee patients in the South East London/Kent

region who went to non-specialist bed-based rehabilitation units (BBR). This shows a comparison of outcome measure results at 1 month post fit-delivery of a prosthesis at non specialist BBR and the ARU (2013).

Patients experience and satisfaction has also been high with one patient stating 'i didn't think when I came here for therapy, I would walk out of here, with a different view for life, thank you all for giving me something to aim for and to achieve.'

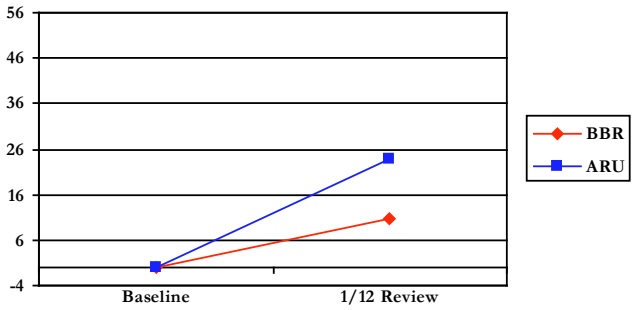
As the lead Physiotherapist at the ARU I am immensely proud of how much we (the ARU team) have achieved in the first

Two Minute Walk Test



SIGAM Median:
BBR = B
ARU = Cb

LCI-5



Timed Up & Go Average:
BBR = 55sec
ARU = 35sec

6 months of the ARU. Whilst developing a new service, developing the team and establishing local and intra-regional links we have continued to provide high quality care to our patients and achieved promising outcome measure results.

I am looking forward to being part of the continuous development of the ARU, and continuing to work with a team that is committed and passionate towards amputee rehabilitation.

For further details about the ARU; information about how to refer and for our patient leaflet please feel free to contact myself at the below email address. Alternatively you can access this information on the Guy's & St Thomas' Foundation Trust Website.

Jodie Georgiou, Highly Specialist Amputee Physiotherapist

Paul Jamieson retires

Paul Jamieson will be familiar to many BACPAR members as the Business Manager for Ossur. It was Paul who would come and service your Femurett, in fact he was instrumental in the decision to keep selling it when it was withdrawn from sale a few years ago. For many years he has supported BACPAR & danced with us at conferences.
We wish him a happy retirement.

Penny Broomhead, Hon Research Officer, BACPAR

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visit us: **algeos.com**

ALG

BACPAR AGM 2013 Minutes

15th November 2013, BACPAR 2013 Conference, Wolverhampton Science Park

Attendance: Julia Earle, Penny Broomhead, Clare Singh, Louise Tisdale, Shu-Sum Geoffrey Yu, Hannah Slack, Emma Rogerson, Amy Jones, Ruth Woodruff, Fiona Grant, Rachel Neilson, Jennifer Fernandes, Kate Primett, Rhian Duffus, Maria Manock, Louise Whitehead, Judy Scopes, Anne Berry, Sue Flute, Jodie Georgiou, Elizabeth Bouch, Andrew Oldham, Tim Randell, Carolyn Hirons, Gillian Atkinson, Patricia Humphreys, Jo Breslin, Lynn Hirst, Janet Mitchell, Mary Jane Cole, Katharine Atkin, Kate Sherman, Kim Ryder, Maggie Uden, Sara Smith, Amanda Hancock, Andres Goldsborough, Roberta Duncan, Michela Catania, Lara Camilleri Pulis, Marcette Cassar, Emma Kidner, Margaret Wilson, Caroline Cater, Hilary Smith, Sarah Bradbury, Philippa Joubert, Anne Harrill, Beverley Moffatt, Jennifer Jones, Jane Cumming, Fiona Smith, Rita Blundell, Natasha Brett, Marion Gimson, Chantel Ostler, Anna Rose, Suzanne Temple, Kate Lancaster, Christine Snaylam, Maria Brown, Nathalie Brodie, Robert Shepherd, Nicholas Yokarinis, Maria Abela, Karen Bending, Emma Weaver, Tracy Millar, Nikki Tebbutt, Elizabeth Geer, Matthew Fuller, Eleanor Bacon, Maggie Donovan Hall, Barbara Brown, Katy Ebanks, Ruth Buckley, Samantha Cripps, Nancy Golland, Andrew Montague, Lindsay Wedgwood, Rachel Bidwell, Lynsey Matthews, Claire Jeffreys, Nikki Bradbrook, Erin Williams, Christine Willingale, Jayne Watkin, Javier Escobar, Amanda Edmondson, Catriona Mawdsley, Katy Muldowney, Helen Scott, Melissa Berry, Debbie Chilman, Emma Tebbutt, Wendy Leonard, Edward Morrison, Emily Hancock, Julie Thorpe, Rachel Humpherson.
Apologies: Jane Greiller

Minutes of the Previous AGM November 2012 Sheffield

Were agreed as a true record. The AGM minutes for 2012 are available on:
http://www.csp.org.uk/documents/minutes-bacpar-agm-28th-september-2012

Treasurer's Report

This was presented by Anne Berry prior to the Chairs report as a number of questions posed to the membership involved BACPARs funds. A new accountant, John Greaney has been appointed as Mr Peck has retired due to ill health.
BACPAR Accounts from 1st July 2012 – 30th June 2013

Income		**Expenditure**	
Subs	4540.00	Travel	2616.95
Capitation Fees	360.00	Printing	5269.86
Course Fees	770.00	Postage and Stationary	108.22
Journal Advertising	2075.00	Course Costs	1581.62
		Bursaries	350.00
		Gifts	38.00
		Other	775.73
Income	7745.00	Expenditure	10740.38
Opening Reserves	22714.08		
Deficit	-2995.38		
Bank Reconciliation	19718.70		

Chairs Report

The report was disseminated in advance of the meeting because there were a number of issues that the membership needed to vote on.

A summary of the report in the form of key issues was presented on the 15th November as part of the AGM agenda. The AGM is open to BACPAR members only.

Only full members and 1 representative from a Departmental membership are eligible to vote.

The following is an outline of BACPAR's activities since the last AGM with reference to the objectives documented within the BACPAR constitution (2013) and the work plan for 2013. Both are found within the 2013 Service Portfolio: http://www.csp.org.uk/documents/bacpar-service-portfolio-2013

An extract of the minutes follows, for full minutes visit: http://bacpar.csp.org.uk/documents/bacpar-agm-2013

BACPAR membership numbers as at 1st November 2013

Membership Category	Numbers as at end of membership year 2012-2013	Numbers as at 1st November 2013
Full	141	132 (includes 4 international)
Support Workers	5	Full includes 2 support workers
Departmental	21	15 (includes 1 international)
Allied associate	12	15 (includes 6 international)
Student	1	Allied associate includes 2 students
	179	162

In addition to the previous the following items should be noted:

The Capitation fee from the CSP (£2 per year per CSP member within the BACPAR membership) subsidises the production of the Journal.

Response to Questions:

Q1. Does the level of access to and discussion re the SAGE articles warrant the continued purchase of articles from SAGE?
Result: Majority agreed. A plea was made from Penny Broomhead for more membership to contribute more to article discussions.

Q2. Is there a BACPAR member already in the role of Learning Champion for their Trust? Does anyone wish to take on this Non Exec role?
No members are currently learning champions. If any of the membership is interested in becoming one please contact Louise Tisdale.

Q3. Elsevier Book Proposal: Does the membership support this project
Elsevier wants BACPAR to write the book with some guidance only and BACPAR would not profit from any involvement in the publication. Clare Singh reported that the proposal alone had involved a great deal of work and that any further involvement would require a big commitment.
Result: Majority agreed that BACPAR as a PN would not pursue this any further however if any individual wanted to address this further their details could be passed onto Elsevier.

Q4. Does the membership support a £3000 research bursary?
Result: Unanimously agreed

Q5. Is the membership happy to accept the proposed merger of the BACPAR regions Wessex and Oxfordshire to become the South Central region?
Result: Unanimously agreed

Q6.Does the BACPAR membership wish to provide further funding to SPARG on a one off basis?
Result: Majority agreed that BACPAR would provide £3720 (incl VAT) unless they get additional funding from other sources.

Q7. Does the BACPAR membership wish to provide further funding to SPARG on a recurrent basis?
Result: Majority agreed to this but that there would be terms and caveats and dependent on BACPARs available funds each year.

Elections

Treasurer Katharine Atkin		Diversity Officer Amy Jones		iCSP Co ordinator Rachel Neilson
Proposed Chantel Ostler		Propsed Jodie Georgiou		Proposed Louise Tisdale
Seconded Tim Randell		Seconded Pippa Joubert		Seconded Lucy Holt
Unanimous		Uninimous		Unanimous

A.O.B.

Both Maggie Donovan Hall and Anne Berry are to be removed as BACPAR bank account signatories. They are now both resigned treasurers. Louise Tisdale is to remain a signatory and following the election at the AGM Katharine Atkin is to be added as a signatory.

SPARG

Early Post-op Management of the Amputee MDT Approach

Date: Friday 20th June 2014

Venue: Westpark Conference Centre Perth Road, Dundee

Cost: £75 (£60 if payment received before 31st March 2014) (Students £50)

Completed application forms (tear off slip) and cheques made payable to "SPARG" and send to:

Louise Whitehead, Vascular Physiotherapy Team Lead Amputee Therapy Gym, East Block, Level 5 Ninewells Hospital, Dundee, DD1 9SY

Queries or for information re BACS payment, please contact: lwhitehead@nhs.net

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Name

Address

Cheque / BACS payment

Receipt sent Y/N

SPARG

EARLY POST-OPERATIVE MANAGEMENT OF THE AMPUTEE - MULTIDISCIPLINARY APPROACH

09:00	Registration including tea / coffee & bacon croissants!	
09:30	Introduction	Helen Scott (SPARG Chairperson)
	Models of care / SPARG	Abi Mackriell (Physio, Hairmyres)
10.00	In-reach – Edinburgh experience	Catriona Mawdsley / Katy Bryce (Physios, Astley Ainslie, Edinburgh)
10:30	Oedema Guidelines	Mary Jane Cole (Physiotherapist Imperial NHS Trust and Senior Lecturer School of Rehabilitation Sciences, St George's)
11.00	Tea / coffee & home baking! Exhibition / posters	
11.30	Care of Remaining Limb / diabetes database	Graham Leese (Consultant Diabetologist, Ninewells, Dundee)
12.15	Best Practice Guideline – Perioperative Analgesia for Acute	
	Phantom Limb Pain	(Liz Colquhoun Specialist Pain Nurse)
13.00	Lunch & exhibition / posters	
13:45	Transtibial amputation	Stuart Suttie Consultant Vascular Surgeon,Ninewells, Dundee
14.30	Roehampton Stump Score	Maggie Uden (Physio, St Georges Hospital)
15:30	Tea / coffee & home baking!	
15:45	Motivational speaker / 500 miles…	Olivia Giles
16:45	Close	

Measuring outcomes: is this improving care for lower limb amputees in Scotland?

SPARG

NHS SCOTLAND

Helen Scott*, Fiona Smith, Joanne Hebenton and Catriona Mawdsely
*Team leader Physiotherapist and SPARG Chairman, Westmarc, Southern General Hospital, Glasgow

Introduction

SPARG was set up in 1991 and is a well established group of every senior NHS physiotherapist in Scotland with a clinical responsibility for people undergoing lower limb amputation.

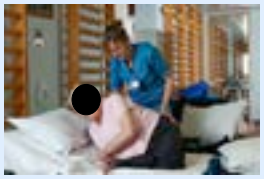
The group uses a web based data base to collect demographic, rehabilitation milestone and outcome data on all people undergoing major amputation in Scotland.

Aim

The aim of this data collection project is to improve rehabilitation care and outcomes for people undergoing a lower limb amputation in Scotland.

The *national* data is used to: -

1. Benchmark services
   - identifying best practice i.e. which services do best and why?
   - develop services in line with best practice
2. Identify national trends
   - raise specific research questions
   - facilitate planning of services



The *local* data is used to: -

- inform local practice

Method

Using a discharge summary form (DSF) SPARG physiotherapists collect data prospectively for each new amputee until they finish their rehabilitation, normally 3-6 months after amputation surgery. This data is anonymised and entered locally onto the web based data base.

Once a year, the data is collated, cleaned and analysed to produce an annual report.

Individual SPARG physiotherapists have access to their own data via reporting facilities in the data base.

Results

Benchmarking: a comparison of one year's data (2010) from the 16 major amputating hospitals has revealed: -

- Percentage of trans-tibial amputations (preferred level) varies from 80% to 38%. NB people with trans-tibial amputation are twice as likely to be successfully fitted with a prosthesis compared to those with trans-femoral amputation.
- Percentage fitted with a prosthesis varies from 58% to 29% (Figure 1)

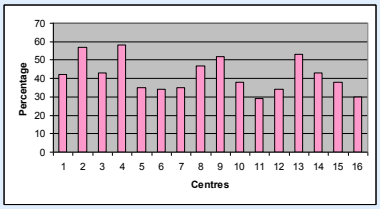


Figure 1: Percentage of amputees fitted with a prosthesis at each of the amputating centres in Scotland (n > 5)

Results continued

Trends

Increasing proportion amputated due to diabetes, (Figure 2).

More in depth data analysis as part of an MSc project has revealed that patients with diabetes have more distal amputations and are approximately four years younger than the non-diabetic population. This work has led to a PhD project fully funded by Diabetes UK looking at rehabilitation outcomes and how they may be optimised.

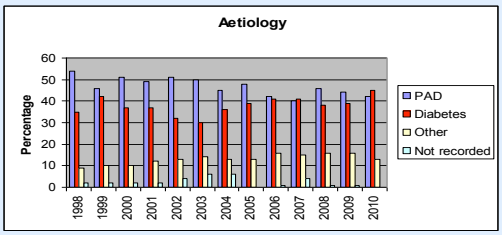


Figure 2: Aetiology of lower limb amputation in Scotland from 1995 to 2010

Examples of improvements in practice: -

- In-reach service: increased length of hospital stay and reduced proportion of patients being limb fitted at one of the major amputating centres prompted the development of a multidisciplinary in-reach service from the local, specialist amputee rehabilitation unit. This service supports less experienced staff deliver effective early rehabilitation and has resulted in patients being fitted with their prostheses **3 weeks earlier**. This and other positive outcomes have resulted in recurrent funding.

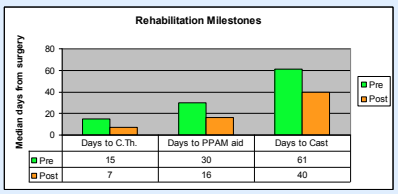


Figure 3: Rehabilitation Milestones for unilateral trans-tibial amputees in median days from final surgery before and after the In-reach service.

Pre = 2009 (12 months)
Post = 2012/13 912 months)

- Increased proportion of trans-femoral amputees abandoning prosthetic use led to the development and validation of the Trans-femoral Fitting Predictor (TFP) Tool to standardise the physiotherapy pre-prosthetic assessment of the trans-femoral amputee. This is now in use across the UK.

Conclusion

Since 1995 demographic data have remained broadly similar except for the increasing proportion of people having amputation due to diabetes. Models of care and outcomes vary hugely across Scotland. SPARG is in a unique position to identify these variations, learn from them and promote best practice. The current challenge is delivering effective rehabilitation as amputee patients are being discharged into the community earlier and /or transferred out of acute, specialist beds into slower stream, non-specialist services.

For copies of the Annual Report, TFP Tool and more information on SPARG please visit the website (http://www.knowledge.scot.nhs.uk/sparg.aspx) or contact Helen Scott directly on:

Telephone: +44 141 201 2639

Email: helen.scott@ggc.scot.nhs.uk

Acknowledgements

This project would not take place without the tireless, loyal and determined work of all the SPARG physiotherapists.

Has Centralisation of The Vascular Service Been Successful? 'A Physiotherapist's Perspective'

Ann Docherty, Joanne Hebenton, Hayley Jones and Fiona Smith

Introduction

Prior to November 2010 the Vascular in-patient service in Glasgow was delivered across five different hospital sites, each with different models of care. Glasgow Royal Infirmary (GRI), Southern General Hospital (SGH), Victoria Infirmary (VI), Gartnavel General Hospital (GGH) and the Western Infirmary Glasgow (WIG).

The service was centralised in November 2010, when a new 47 bedded specialist unit was created at the WIG to provide all vascular inpatient care city wide.

Working within this new specialist unit we were interested in the impact of centralisation on the service provision for our patients.

Aim

- To examine objective drivers for centralisation according to the Acute Services Review (2002). Primarily these are length of stay and mortality rates.

Objectives

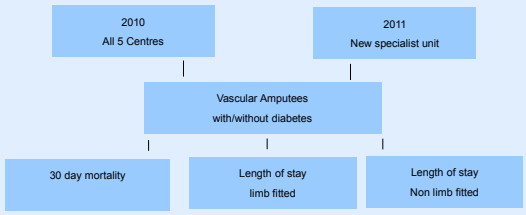
1. Has centralisation lowered mortality rates for patients?
2. Was in-patient stay reduced within the centralised unit?
3. What are the other factors that need to be considered when evaluating centralisation of a service?

Method

Pre and post centralisation data was taken from the Scottish Physiotherapy Amputee Research Group (SPARG) national data base and from patient records, for all patients who had a major lower limb amputation in Glasgow ,as a result of vascular disease, with or without diabetes.

Length of in-patient stay and the 30 day mortality rate for 2010 in all 5 hospital sites and for 2011, following centralisation, were calculated. In-patient stay was recorded from date of amputation until date of final discharge from the in-patient hospital setting. Data was divided into those who limb fitted with a prosthesis and those who did not. We also looked at the length of in-patient stay within the new specialised unit. Mortality was measured within 30 days following amputation.

Fig 1: Inclusion/Exclusion

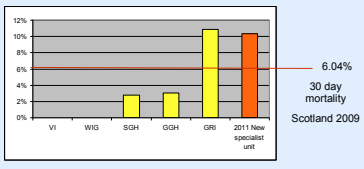


Results

30 Day Mortality

In 2010 patients undergoing major lower limb amputation had surgery in one of five hospitals, with a mean 30 day mortality of 3%.

Fig 2. 30 Day Mortality 2010/2011

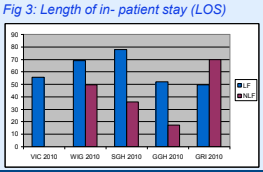


This ranged from 0% at the VI and the WIG, where the number of patients was very low, to 10.9% in GRI which was the largest unit pre-centralisation. There was a 3% mortality in GGH and a 2.8% in SGH, both of these were below the national average (6% in 2009). Post centralisation the 30 day mortality was10.3%.

In-patient stay (LOS)

Length of in-patient stay (LOS) also varied between the 5 different centres in 2010. The mean LOS was 60 days for limb fitted patients (LF) and 45 days for non limb fitted patients (NLF).

Fig 3: Length of in- patient stay (LOS)

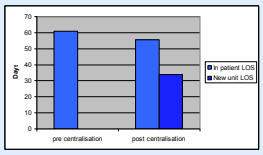


Results

In 2011 the LOS for LF patients reduced from a mean of 60.8 days to 55.4 days.

Fig4: LF in-patient LOS

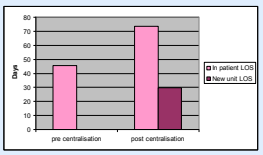
- In 2010 : 60.8 days
- In 2011 from new unit : 34 days
- In 2011 total in-patient stay : 55.4 days



The LOS for NLF patients has increased from a mean of 45.6 days to 73.4 days.

Fig 5:NLF in-patient LOS

- In 2010 : 45.6 days
- In 2011 from new unit : 29.9 days
- In 2011 total in-patient stay : 73.4 days

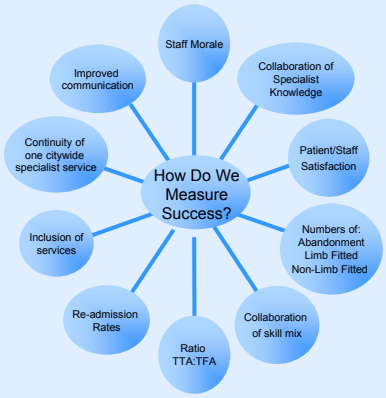


Discussion

The 30 day mortality rate has remained the same as GRI, which is higher that the national average(2009). With the opening of a new unit a reduction in mortality may not occur in the first year and further longitudinal analysis is required.

There was a reduction in the LOS within the new unit, 27 days for LF and 16 days for NLF patients. However, if we look at the total LOS the reduction for LF reduces to 6 days and what is more significant is an increase of 27 days in the total LOS for NLF patients. A reduction in the LOS in the new unit was necessary following the reduction in the number of vascular in-patient beds in Glasgow. This has been achieved, but it has produced an overall increase of 27 days for NLF patients, who now spend more time in non specialist units, at a significant increased cost to the Health Service. Many patients are now having a longer in-patient stay in non specialist units.

The government states length of stay and 30 day mortality are the key drivers for successful centralisation. However what other factors contribute towards a successful centralisation? Once all the 2011 Glasgow SPARG data has been collected, further research into the number of patients limb fitted, non limb fitted, limb abandonment and re-admission rates would assist in answering our question.



Summary

- Little change in mortality rate.
- A decrease in LOS in the new unit for LF and NLF patients.
- A reduction in total LOS for LF but a significant increase for NLF patients.
- Patients are spending more time in non specialist units.

Conclusion

It is too early to thoroughly analyse the success of vascular centralisation from a qualitative perspective. However it is clear that early transfer out of the specialist unit has resulted in a significant increase in the total LOS for NLF patients and many patients are having reduced in-patient specialist care. We recognise that there are other outcomes which are important, especially to our patients, so we plan to follow up this study in January 2013 when further data becomes available.

References available on request.

Royal Free London NHS
NHS Foundation Trust

BACPAR

Clinical Management in Acute Amputee Rehabilitation

This course will be of interest to Physiotherapists, Occupational Therapists and Rehabilitation Assistants who treat amputees in the acute surgical setting.

Venue: Royal Free London NHS Foundation Trust, Pond Street, Hampstead Heath, London, NW3 2QG.

Preliminary Programme:

Thurs 28 Aug 2014, 9.30am – 17.30pm	**Fri 29th Aug 2014, 8.30am – 5.00pm**
9.30 – 9.45 Registration	8.30 – 9am Registration/ Welcome
9.45 -10 Welcome	9 - 9.45 Care of Diabetic Foot (Podiatry)
10 – 11 Amputee Surgical Management (Vascular Consultant)	9.45 – 10.30 Wound Management (Tissue Viability)
11 – 11.30 Pain Management	10.30 -10.45 Break
11.30 – 11.45 Break	10.45 – 11.15 Changing Behaviour (Health Psychologist)
11.45 – 13.30 PT/ OT pre/ post-operative intervention	11.15 -13.00 Gait Analysis Presentation/ Practical
13.30 – 14.30 Lunch Symposium	13.00 – 14.00 Lunch Symposium
14.30 - 17.00 Practical Therapy Sessions split into OT/PT groups: (Exercise Prescription/ PPam aid /Femurett /Transfers/ PADL's/ ADL's/ Wheelchairs)	14.00 – 16.30 Prosthetic Intervention (Presentation and Practical)
17.00 – 17.30 Discussion/ Close	16.30 – 17.00 Discussion/ Close

Cost: £125 (Two day rate) £75 (One day rate, Thurs or Friday)

Early Bird Rate (Pre 30th June 2014): £110 (Two days) £65 (One Day)

BACPAR members will automatically be issued early bird rates. LIMITED AVAILABILITY (50 spaces only)

Lunch/ Drink/ Refreshments will be provided. Social evening on the Thursday night.

Please contact Kate Primett (Msk Inpt Team Lead) for more details/ application form.

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