

## **NICaN AHP Brief Research Proposal Template**

Contact name: Claire Mason  
Profession: Haematology Physiotherapist  
Contact Address: Physiotherapy Department  
Belvoir Park Suite  
Northern Ireland Cancer Centre  
Lisburn Road  
BT9 7AB

E-mail: Claire.mason@belfasttrust.hscni.net  
Telephone: 02890 699212

Signed: Claire Mason  
Date: 05/08/2010

## **The Proposal**

### **The clinical question – hypothesis:**

Can a twelve week exercise and education scheme improve physical function and quality of life (QoL) for Haematology outpatients?

### **The study background:**

Cancer is now recognised as a chronic disease. Cancer care must address the patient's QoL (Rankin, Robb et al. 2008). Cancer services should be designed to meet the ongoing needs of cancer survivors, in all care settings, using a team approach. Survivors need to return to an active life and be given advice on healthy living (DoH 2010). Priority should be given to educate cancer survivors on weight, diet and physical activity to prevent recurrence, secondary cancers and other co-morbidities.

Physical deconditioning, cancer-related fatigue, reduced muscular strength and cachexia are prevalent post treatment in haematological patients (Liu, Chinapaw et al. 2008). Exercise can have a positive effect on problems facing cancer survivors (MacMillan Cancer Support 2009).

The most effective way of exercising and educating haematological outpatients has yet to be determined.

### **The rationale for the new research:**

Courneya, Sellar et al (2009) investigated the effects of aerobic exercise on physical functioning and QoL in lymphoma patients. Immediately post intervention the exercise group had significantly better results for physical functioning and QoL. This study only included lymphoma patients and therefore the results can not be applied to myeloma or leukaemia survivors.

A study of high quality was conducted in breast cancer outpatients investigating the immediate and long term effects of a 12 week exercise class and information sessions (Mutrie et al, 2007). Significant improvements in the 12 minute walk test and positive mood score were seen immediately and six months after the intervention.

More research is needed to see if these improvements would be seen in all haematology outpatients during or post chemotherapy.

### **A basic study plan:**

Group exercise classes and multi-disciplinary information sessions would be offered to outpatient haematological cancer survivors. Participants will attend

during or post chemotherapy. The circuit training classes should include aerobic, resistance and balance exercises. During the scheme participants would be encouraged to increase their activity levels at home and keep an activity chart to try to bring them in line with national exercise guidance.

Information sessions should include advice on diet, weight, fatigue management and the benefits of increasing physical activity.

Outcome measures would be implemented pre and post the twelve week exercise classes, and also three months after the scheme. These could include the six minute walk test, the sit-to-stand test and the FACT- fatigue scale.

Results should demonstrate if a group exercise and education scheme benefits haematological outpatients. The exercise group would ideally be compared with a control group of standard intervention e.g. advice leaflets. A randomised study design would produce the most reliable results.

### **Supporting references:**

COURNEYA, K., SELLAR, C., STEVINSON, C., MCNEELY, M., PEDDLE, C., FRIEDENREICH, C., TANKEL, K., BASI, S., CHUA, N., MAZUREK, A. and REIMAN, T., 2009. Randomised controlled trial of the effects of aerobic exercise on physical functioning and quality of life in lymphoma patients. *Journal of Clinical Oncology*, **27**(27), pp. 4605-4612.

DEPARTMENT OF HEALTH, 2010. *The National Cancer Survivorship Initiative Vision*. London: Crown.

LIU, R., CHINAPAW, M., HUIJGENS, P. and VAN MECHELEN, W., 2009. Physical exercise interventions in haematological cancer patients, feasible to conduct but effectiveness to be established: a systematic literature review. *Cancer Treatment Reviews*, **35**, pp. 185-192.

MACMILLAN CANCER SUPPORT, 1 October, 2009, Exercise after cancer treatment [Homepage of Macmillan Cancer Support], [online]. Available: <http://www.macmillan.org.uk/Cancerinformation/Livingwithandaftercancer/Lifeaftercancer/Exerciseafter.aspx> [08/06/2010]

MUTRIE, N., CAMPBELL, A., WHYTE, F., MCCONNACHIE, A., EMLSIE, C., LEE, L., KEARNEY, N., WALKER, A. and RITCHIE, D., 2007. Benefits of supervised group exercise programme for women being treated for early stage breast cancer: pragmatic randomised controlled trial. *British Medical Journal*, **334**, pp. 517-524.

RANKIN, J., ROBB, K., MURTAGH, N., COOPER, J. and LEWIS, S. (eds), 2008. *Rehabilitation in Cancer Care*. Chichester: Wiley.