

## The Stroke Outcome Study - a randomised controlled trial of psychological treatment

Depressed mood is a common problem after stroke - it affects quality of life and potentially effects rehabilitation outcomes - but there are few good studies to inform decisions on the best way to intervene or prevent it. The antidepressant trials are small, and the trials of psychosocial interventions do not show any consistent benefits. As a result, Professor Allan House and colleagues were funded through the NHS R&D programme to evaluate the effect of a brief psychological intervention, given to stroke patients (and carers) after discharge. We assessed its effects on psychological distress, major depression, social activities, carer outcomes and satisfaction. We also conducted an economic analysis - to find out what the therapy cost, as well as what it did.

The psychological intervention was evaluated within an RCT, by comparing it with treatment-as-usual and non-specific support from volunteer visitors. The intervention was a form of problem-solving therapy, structured into six sessions within a manual. The aim of the therapy was to teach problem-solving skills, to help patients and carers to cope with stroke's consequences. The therapists, both psychiatric nurses, aimed to see patients every fortnight.

The volunteer visitors were given brief training in the effects of stroke and were asked to visit patients 6-8 times. About half the volunteers had personal or family experience of stroke.

During 1995-97 we screened 1400 living patients from Leeds and Bradford hospitals within 1 month of stroke, to assess fitness to participate (including sufficient speech & cognition). At the baseline interview around 20% of the 448 recruited patients were rated as depressed. After interview patients were randomised to one of the 3 strands.

At 6 months follow-up there was no difference between patients in the three groups in levels of psychological distress or rates of depression, although there were trends

for lower rates in the therapy group. Patients in the therapy group were more satisfied with aspects of post-discharge care. There were no differences between carers in the three groups in carer strain or psychological distress. Carers in the problem-solving group were more satisfied with three aspects of care.

At 12 months follow-up patients in the three groups had similar levels of social activity and disability. Patients in the problem-solving group had lower psychological distress scores ( $p < .05$ ) and fewer cases of major depression (not statistically significant). The median distress score (\*GHQ-28) in therapy patients was 1 point lower than in the volunteer group and 2 points lower than in the treatment-as-usual group. Therapy group patients were more satisfied with several aspects of their care. There were no differences between carers in the three groups in carer strain or distress, but carers in the therapy group were more satisfied with one aspect of care. We followed up over 90% of living patients, and more patients in the therapy group refused follow-up.

The economic analysis involved compiling data on all services used by the patient after discharge. These included the GP, community health services, social service input, residential care costs and re-admission to hospital. It also included the cost of the interventions (CPN + supervision for therapy, travel expenses and average wage for the volunteers). Therapy reduced distress, but was more expensive than the other two groups. A cost-effectiveness analysis showed that, compared with volunteers, problem-solving therapy was £1200 per person more expensive with a mean improvement of 1.3 GHQ points. Whether this additional cost is worth paying, is a decision for the purchaser.

The results are encouraging. We have shown that a short-term psychological treatment is acceptable to most stroke patients and can be effective in reducing psychological distress. No effect was found in carers, although many were absent from the therapy sessions. We hope that others will want to evaluate problem-solving therapy in stroke. A multi-centre trial would answer some of the questions left by this study. We are equally keen to evaluate the training and supervision of other staff in using the therapy manual.

Please contact Peter Knapp for further details of the study's methods and findings.

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\*The GHQ-28 is a self-completion questionnaire that assesses general psychological distress.

### Do you have a favourite Stroke web-site?

Ours is the Northern Ireland Multidisciplinary Association for Stroke Teams which can be found at <http://www.compura.com/stroke> this is a very comprehensive site. Let us know your favourite sites and we'll include them in the next newsletter.

## Developing a programme of research into nursing and stroke

Earlier this year a group of people working both in the Trust and the University, including consultants, nurses, researchers and academics, came together to support a bid to the School of Healthcare Studies, University of Leeds. The bid was headed up by Dr Anne Forster, and was specifically for the funding of a post-doctoral research fellow to develop a programme of research into nursing and stroke. I was the successful applicant, and came into post in August 1999.

Since coming into post, I have been visiting those involved in supporting the bid, and others throughout the Trust that might be interested or involved in such a programme of research. This developmental phase of the Programme has focused mainly on gaining insight into the most important research areas that people working in the field have

identified. This whole process has been a source of continual surprise, not only at the richness of the resources available, such as the Leeds Stroke Database, but also at the wealth of knowledge and ideas that were so freely given to me.

One of the consequences of this round of visits, is the setting up of the Leeds Stroke Research Discussion Group, which had its first, very successful, meeting on 9<sup>th</sup> December 1999. The need for the Group had been identified some time ago, but it needed somebody whose job included the time and resources necessary for the co-ordination of all the activities. It was decided at the meeting that the main focus of the Group would be the identification and discussion of research topics arising out of the daily routine of those working with stroke. The next meeting, to be held on the 21<sup>st</sup> January 2000, will be presented by Jo Thompson and Alison Scott, who will talk about issues that they confront in their work with patients after stroke both in an Acute and a Rehabilitation Stroke Unit.

The development phase of my post is now concluding with a group meeting to discuss the proposals I have drawn up for the programme. Details of the individual projects within the programme will be published in the March issue of this newsletter.

**Kahryn Hughes, Research Fellow, University of Leeds**

If you would like further information about the Stroke Research Discussion Group please contact Kahryn on Leeds (0113) 2336886 or Email: k.hughes@leeds.ac.uk

**A Nurse-Led Cerebrovascular Risk Factor Clinic**

The risk factor clinic has been in operation now for nine months, albeit with a slow start. Referrals are taken from patients seen in the cerebrovascular clinic and in-patient discharges.

**Table**

Risk Factors	Rationale
1. Hypertension	Raised blood pressure is the most important treatable and causal risk factor for stroke. (Collins and MacMahon 1990).
2. Smoking	Smoking is associated with a doubling of the relative risk of ischaemic stroke. (Donnan et al, 1993).
3. Diabetes Mellitus	Diabetes Mellitus about doubles the risk of ischaemic stroke. (Barrett-Connor & Khaw, 1988).
4. Raised Cholesterol	As this group of patients are at high risk of ischaemic heart disease then reducing their cholesterol minimises their risk of coronary events. (Warlow et al, 1996).
5. High Alcohol Intake	High alcohol intake is indirectly implicated as it is associated with a rise in blood pressure. (MacMahon & Norton, 1986).
6. Dietary Salt	Reducing salt intake reduces blood pressure, particularly in those people whose blood pressure is raised initially. (Frost et al, 1991).
7. Exercise	It is not known whether exercise offers any protection following stroke but it has beneficial effects on general well being and so should be encouraged. (Warlow et al, 1996).

After stroke or TIA, the risk of recurrent stroke is higher within the first few weeks and months: about 10% in the first year and then about 5% /year. (Bamford et al, 1988).

In addition to the correct medical management for secondary prevention, modification of risk factors is also important (see table).

The nurses role within this process is to ensure that all relevant risk factors have been identified and counsel the patient on health behaviour change in order to reduce their risk of further events.

A key part of the nurses role is that of advice giving as very few patients are aware of the adverse health effects of poor diet, smoking etc. However straightforward advice giving is not the only approach for achieving behaviour change as peoples health behaviour and beliefs can be extremely complex. They are linked to the individuals social and cultural position, which is shaped by experience, knowledge, values and expectations (Ewles & Simmet, 1992). By using a counselling style known as motivational interviewing (Rollnick et al, 1999) it is possible to increase the patients readiness to change.

In addition to this patients may need educating about their anti-thrombotic medication in order to ensure compliance and the clinic provides a useful opportunity to check this.

Many patients will also need advice relating to other aspects of their stroke, for example driving, employment, emotional or relationship problems which may need referral on to other agencies or groups.

In contrast to the doctor's 5-10 minute clinic time, the nurse has a 45 minute appointment slot. This enables a thorough review of the patient's risk factor status and allows for a more holistic approach to the patient's situation.

The continuing management of risk factors is mainly a role for the primary health care team as patients are rarely seen more than once, but the risk factor clinic remains an information resource for community staff.

**Sally Blundell, Stroke Support Nurse is based at St James's University Hospital and can be contacted on Leeds (0113) 2065901**

#### References:

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## **Report on Stroke Association Conference held at University of Nottingham 7-8<sup>th</sup> September 1999**

This conference formed part of the Stroke Association Centenary celebrations. It is fitting that it should have taken place in Nottingham where so much high quality research from various disciplines has originated. The two days began with a historical perspective of stroke care and research in the city.

Nottingham was clearly very forward thinking from an early stage with a dedicated stroke unit opening in 1983. In 1992 the Chest, Heart and Stroke Association funded the first Chair of Stroke Medicine in the U.K. now held by Philip Bath.

After this introduction there were a series of presentations of local research. Marion Walker discussed her study on community Occupational Therapy (OT) for stroke patients not admitted to hospital (*Lancet* 1999; 354: 278). This study found that OT visits in the home for up to six months reduced subsequent disability, handicap and carer strain.

Next the results of the largest randomised controlled trial in rehabilitation so far, the TOTAL study, were presented by Avril Drummond. This multi-centre trial randomised 456 patients to receive leisure OT or activities of daily living focused OT or control treatment. The two active therapy groups received OT sessions at home for up to six months. Previous small studies have shown benefits with leisure orientated OT. The TOTAL results showed small positive effects but these were not statistically significant. The OT input was not within a multidisciplinary Community Stroke Team and this may be one factor as well as treatment type and intensity and the outcome measures' sensitivity to change. The fact that such a large and complex trial could be co-ordinated and completed is a major achievement. A

plea for more rehabilitation units to take part in planned prospective trials was made.

Recent projects concerning the validation of a Driving Safety Assessment Tool for use with stroke patients, Cognitive and Behavioural Therapy after stroke, and an investigation into carer strain and its precipitating factors were outlined. Dr Paulette van Lyette, a Research Physiotherapist, detailed her work comparing treatment sessions in a Bobath and a movement science approach. The latter approach focuses on retraining from an early stage and is more task-orientated. She found many similarities in approach when each of the sessions was directly observed. The differences seem to be in increased use of everyday objects and detailed verbal feedback to patients in the movement science approach and more use of physiotherapy equipment in the Bobath approach.

Two excellent presentations followed about magnetic resonance imaging and stroke. Professor Alan Moody outlined the usefulness of this form of imaging in distinguishing irreversibly damaged brain tissue from ischaemic but viable brain. The technique of functional magnetic resonance imaging was also discussed and how this might give insights into how the brain reorganises after ischaemic damage.

The conference was drawn to a close by David Elliot from Birmingham who summarised the work of the Stroke Association in promoting and developing better services for stroke patients, funding high quality research and supporting training through stroke fellowships.

Altogether this was an enjoyable, stimulating and truly multidisciplinary conference.

**Dr Peter Wanklyn, Consultant Geriatrician,  
Leeds Teaching Hospital NHS Trust**

Our congratulations go to Dr PG Eastwood of the Grange Medical Centre who won the latest prize draw.

## Are we good communicators?



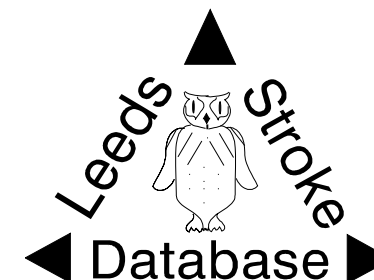
We are holding our next study session on the different aspects of **communication** in the management of stroke on 26/01/2000. We have distributed our flyers throughout Leeds, but if you haven't heard about the event and want more information please give us a call on Leeds 0113 3928079, 0113 3928146 or Email: pbrunyee@ulth.northy.nhs.uk

## Noticeboard

We would like to start a regular notice board of stroke related events and meetings (both local and nationwide). If you know of any forthcoming events of interest please let us know.

We also welcome contributions or suggestions for the newsletter. If you would like to submit an article for the next edition of the Leeds Stroke Review please contact either Pauline Brunyee or Sheila Boyes at the address on the front page.

## LEEDS STROKE REVIEW



**Edition 11 – January 2000**

**Welcome to the Millennium edition of the  
Leeds Stroke Review.**

We would like to wish all of our readers a happy and healthy New Year.

This bumper edition brings you reports from;  
Peter Knapp on the Stroke Outcome Study,  
Kahryn Hughes on her post to develop a programme of research into nursing and stroke,  
Sally Blundell on an innovative nurse-led cerebrovascular risk factor clinic and last but not least,  
Peter Wanklyn writes about the Stroke Association Conference held in September 1999.

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