Vocational Rehabilitation & RETurn to work After stroKE

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Work is important

- Economic and psychological wellbeing, self esteem, sense of achievement, independence, freedom
- Central to a person’s identity, social roles and status and Participation in society

Human Right

Worklessness: risks and harm

- Poverty
- Physical and mental deterioration
- Psychological distress and depression
- Loss of work-related habits
- Social exclusion
- Increased suicide and mortality (Waddell and Aylwood, 2005)

Mclean et al. (2005)
- Health risk and life expectancy greater than many "killer diseases" (Waddell & Aylward, 2005)
- Health Risk = smoking 10 packs of cigarettes per day (Ross, 1995)
- Suicide rate increased 6x in longer-term worklessness (Bartley et al., 2005)

DWP, Working Lives, the Future of Work Health and Disability 2017
Black and Frost 2011, Waddell and Burton 2006, Taylor et al. 2017
Stroke and work facts

• 1/4 strokes in working age adults, fewer than half resume work (Daniel et al, 2009)

• If not returned to work within 2 years, return unlikely
  (Johnson 1987; 1998; Kendall et al. 2006; van Velzen et al. 2009)

• Reduced quality of life and poorer psychosocial outcomes
  (Robison et al, 2009, Busch et al, 2009)

• Huge economic impact (treatment and productivity loss) ~£8.9 bn year in UK (Saka et al, 2009), Lost productivity £1.6 bn (Patel et al, 2017).

• UK Government want health services to provide timely support to ensure people who develop health conditions return to and remain in work
‘Whatever helps someone with a health problem to return to, or remain in work’ (Waddell, et al, 2008)

4 distinct areas:-

- **Job Preparation** - Preparing people for work
- **Job Retention** - Keeping people who have a job, in work
- **Work Return** - Finding new work
- **Planned withdrawal from work**
What’s the problem?


- Postcode lottery
  - ~ 37% community services address work needs (CQC 2011)

- Stroke rehabilitation not conducive to supporting job retention.
  - Time limited - rehab ends by 6 months
  - Focussed on recovery and short term functional goals
  - Impairment driven access criteria

- Work is a biopsychosocial problem
- Environmental and social factors important determinants of success in RTW
International Classification of Functioning Disability and Health (ICF) (WHO 2001)

• Job
• Employer Attitudes
• Family support
• Socioeconomic class
• Local economy
• Access to rehab
• Rehab content, scope and capacity
• Transport
• Attitudes of Health Care Professionals

Personal beliefs and attitudes
Mood
Confidence

Walking
Using the telephone

Role as a worker

Communication
Balance

Body Functions & Structure

Activity

Participation

Health condition
(disorder or disease)

Contextual factors

Environmental Factors

Personal Factors
Evidence - predictors of return to work

Age ≤55
Male Sex
Less severe stroke
Greater functional ability
No aphasia
No attention dysfunction
Able to walk
Preserved cognitive capacity
Edwards et al, 2018

• Non-manual job
• Family support
• Socioeconomic class
• Economic factors

• Believing work is important
• Not seeing oneself as a burden on others
Lindstrom et al, 2009
Indicators for return to work after stroke

- Perceived importance of work (OR 5.10)
- Not seeing themselves as a burden on others (OR 3.33)
- Support from others (OR 3.66)
- Retaining the ability to run a short distance (OR 2.77)
- Higher socioeconomic codes (OR 2.12)

External support from others and a positive attitude to return to work more important than independence in PADL and cognitive factors

Lindstrom et al, 2009
Lack of research evidence

Systematic reviews

- Return to work after young stroke, Edwards et al, 2018;13(3):243-56
- Frequency of return and predictors
- Only two studies identified that examined the impact of an acute or rehab intervention on work outcomes

- Lack stroke-specific RCTs with sufficient statistical power and a lack of health economic analysis to determine effectiveness of vocational programmes

- Interventions poorly described (Baldwin and Brusco, 2011)
Intervention studies

- RCT (n=94) of a six week OT/PT workplace intervention for stroke survivors with 6 mth follow up. At 6 mths 24 (60%) intervention and 8 (20%) controls in work. Ntsiea (2013)

- Feasibility RCT (n=46) early (5 weeks post stroke) stroke specific vocational rehabilitation job retention model. Feasible to deliver and measure, acceptability. All severities but most participants mild-moderate stroke. At 12 months 11/23 vs 6/23 in work Radford et al, (2013) , Grant et al, 2014

Features: Early intervention, work ability assessment, case-coordination and employer engagement
4 Stage Project

1. Interview and observational study of current provision

Aim

To determine what exists, where and how stroke survivors work needs are currently met

To identify barriers to work return within existing provision

(So that we could develop an intervention to bridge gaps and return stroke survivors to work)

Sinclair et al, Disabil Rehabil, 2014; 36(5): 409-417
4 Stage Project

1. Interview and observational study of current provision

- People with visible disability got the most help
- People with hidden disabilities and milder strokes were missed
- Health services didn’t go into the workplace - VR not seen as ‘core health business’
Findings: Summary

- No mechanism for identifying people who were employed at the time of stroke

- No sanctioned VR pathway - access relied on brokered provision and knowledge of the health care system

- Existing services fail to meet stroke survivors work needs
  - Waiting lists - allow people to fall out of work
  - Issues in their ability to cross boundaries
  - Meet some needs at the expense of others

- Employers and patients wanted HCPs with stroke expertise

Radford et al, JHSRP, 2013, 18 (2S) 30-38.
Early Stroke Specific Vocational Rehabilitation

Case coordination model

- Assessing stroke impact on patient and their role as worker
- Educating patients/families/employers about stroke and its impact on work
- Strategies to lessen impact e.g. pacing to manage fatigue
- Work preparation i.e. establishing routines activities to increase stamina, concentration and confidence; practicing work skills
- Liaison with employers/ tutors to plan and monitor a phased return to work.

- Individually tailored, ≥ 12 months;
- Face to face sessions, liaison and travel

Findings feasibility trial

- Recruitment 2.8 per mth
- ESSVR was acceptable, good compliance (1 dropout)
- ESSVR can be effectively delivered and measured using standardised and bespoke questionnaires
- Reasonable response rate 73.9%

- More intervention participants in work at 12m and more returned to pre-stroke working hours

- Larger trial needed to demonstrate effects

Grant et al, 2014
RETAKEN

RETurn to work After stroKE

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Collaborators: University of Leeds, University of Central Lancashire,
University of Manchester, University of East Anglia, Kings College London
Aim

Is early stroke specific vocational rehabilitation (ESSVR) in addition to usual NHS rehabilitation (UC) more effective and cost effective at returning stroke survivors to work and keeping them there at 12 months post-randomisation than UC alone?

Primary Outcome
• Is early stroke specialist vocational rehabilitation (ESSVR) delivered by an OT addition to usual NHS rehabilitation more effective than usual NHS rehabilitation alone at improving stroke survivors self-reported work outcomes 12 months after randomisation?

Secondary Outcomes
At three, six and 12 months:
• Does ESSVR improve mood, function, participation, health-related quality of life and post-stroke confidence?
• Is ESSVR cost-effective?
• To measure intervention compliance and how the intervention is experienced and understood by providers and recipients, and to explore the organisational implications of embedding and sustaining the intervention in preparation for wider NHS roll-out.
Trial Design

• Definitive multi-centre (20 sites) prospective individually randomised controlled trial with cost-effectiveness evaluation, comparing ESSVR plus Usual NHS Rehabilitation to Usual NHS Rehabilitation alone.

• **760 adults** (age 18+) admitted to hospital with new stroke, in work (paid or unpaid) prior to stroke onset, capacity to consent, sufficient proficiency in English to contribute to data collection.

• **Excluded** - People not intending to work.

• **Carers** - Nominated by stroke survivor.

• **Intervention Group:** Early specialist vocational rehabilitation (ESSVR) delivered by an Occupational Therapist, within 8 weeks of stroke + Usual NHS Rehabilitation

• **Control Group:** Usual NHS Rehabilitation

• Follow up postal/online questionnaires at three, six and 12 months.
**Setting:** 20 acute stroke services (HASU, ASU, Stroke rehab unit, ESD, community rehab)

Potential participants assessed for eligibility up to 8 weeks post stroke

**Inclusion:** Adults age > 18 years with new stroke (all severities); in paid/unpaid work before stroke; capacity to consent; sufficient proficiency in English

6 month internal pilot (8 sites)

Baseline Assessment (post-stroke): by CRN

**Excluded:**
- Not intending to work

Follow-up
- Red: <65%
- Amber: <80% but ≥65%
- Green: ≥80%

Recruitment
- Red: <1pt/month/site
- Amber: <2 but ≥1 pt/mth/site
- Green: at least 2 pts/mth/site

Patients identified across further 12 sites

ESSVR

Randomisation (2/site/month)

Usual Care

Randomisation

STOP

Treatment & follow-up of recruited patients continue.

Usual Care

Postal/online follow-up 3, 6, 12m post randomisation (text, phone reminders & support)

Proceed to main trial after assessment of recruitment & follow-up.
Complex intervention trial

Vocational rehabilitation is a complex intervention that crosses organisational and service boundaries

- Number of interactions between components
- Therapists without VR expertise trained to follow a process and deliver new and sometimes difficult interventions
- Individually tailored
- Behaviour change by stroke survivor and employer recipients
- Involves people and organisations outside of the NHS
We want to be confident in and able to explain the trial outcomes

Did the RETAKE OTS
- deliver the intervention as intended (Fidelity)
- are competent and confident to do so (Competency)

If not..
- Was the training and mentoring adequate? Acceptable?
- Did complex contextual factors (NHS organisation, employment related, personal) affect implementation fidelity?
- Did the patients adhere or respond?
- Was the intervention acceptable to patients? Employers? NHS staff?
- Was there contamination?
Process Evaluation
Aim: To measure fidelity and quality of implementation - enablers and barriers to intervention delivery, contextual factors associated with variations in outcome, and that would support implementation into practice.

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<thead>
<tr>
<th>Quantitative data methods</th>
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<tbody>
<tr>
<td><strong>Site Survey</strong>: Description of participating centres stroke rehabilitation pathway, numbers of qualified staff, support staff, caseload.</td>
<td><strong>Interviews</strong> with:</td>
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<td><strong>Service developments in VR</strong></td>
<td><strong>ESSVR OTs</strong>: Experiences of participating in training and delivering the intervention.</td>
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<td><strong>Recording Intervention</strong>: what, when, how much, where?</td>
<td><strong>Stroke survivors</strong>: Experiences of taking part and perceptions and experiences of support to return to work.</td>
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<td>- Intervention records and clinical notes completed by therapists</td>
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<td>- Resource use data completed by patients.</td>
<td><strong>Employers</strong> (where stroke survivors consent to employer involvement): Their views of the ESSVR intervention (acceptability etc.)</td>
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<td><strong>Case Study</strong>: Random 5% of both UC and intervention participants invited to be ‘Case Studies’:</td>
<td><strong>NHS Staff</strong>: Effects of delivering the support, changes in practice, barriers to implementation.</td>
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<tr>
<td>- Session observations</td>
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<td>- Intervention fidelity checklists completed</td>
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Study Progress

• First site opened May 2018
• 11 sites open to recruitment.
• Further 7 sites due to open end 2018.
• 92 participants recruited to date.
• 36 OTs completed initial training
  • 5 OTs completed 6 month refresher training

We are looking for 5-6 more sites
Contact: RETAKE@leeds.ac.uk
Summary

- UK Government - keeping people with long term conditions in work is the role of Health
- Guidelines suggest addressing stroke survivors work needs should be integral to stroke rehabilitation
- Lack of evidence to inform how best to do this post stroke
- Need for adequately powered RCT’s of biopsychosocial vocational rehabilitation with process and context evaluation to inform implementation in clinical practice
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