Fitness training in Stroke Survivors; Implementing National Guidelines for Cardiovascular Training in a community rehabilitation setting; Leadership Placement

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Introduction:

Secondary stroke prevention emphasises modification of lifestyle-related risk factors, with growing evidence supporting the role of physical activity and cardiovascular training as both effective and feasible for stroke survivors Saunders et al, 2020, Regan et al, 2021). However, challenges in accessing and delivering such programmes persist, with many studies investigating factors that influence engagement in cardiovascular exercise during stroke rehabilitation (Boyne et al ,2017)

Aim:
Evaluate whether national guidelines on cardiovascular (fitness) training for stroke survivors are being implemented within the HCNRT service.

Objectives:
• Identify current practice regarding exposure and referral to cardiovascular training.
• Explore barriers and facilitators influencing clinician engagement and referral.
• Generate insights to inform service improvement using the Knowledge-to-Action and NHS quality improvement frameworks.

Methods

Project approved by NOCLOR and West London Clinical Audit team.

Two MSc Physiotherapy students from King's College London completed a leadership research placement with Hounslow Community Neuro- rehabilitation Team Services.

- Literature review on barriers to post-stroke cardiovascular training & development of thematic codebook
- Interviews with physiotherapists at HCNRT
- Clinical notes audit ,benchmarking against National Stroke Guidelines

Sample:
40 stroke patient records
6 HCNRT Physiotherapists Interviewed

Data analysis
- Deductive thematic analysis of interview responses (Creswell, 2013)
- Analysed data sets against each other (mixed methods analysis)
- Presented findings to HCNRT

Results:

Goal Setting:
Staff set functional SMART goals but no fitness-related goals. **Barriers:** stroke severity, disability level and patient priorities.

Fitness exercise prescription:
Staff report moderate confidence .Fitness prescription was minimal and rarely recorded with intensity. **Barriers :** limited time, equipment and resources restrict delivery of adequate frequency and intensity

Safety Screening prior to fitness training:
Safety assessed via medical history and NEWS2, with good documentation. **Barriers:** Knowledge & Skills ;Staff report needing training in submaximal field tests.

Referral Pathways:
Staff aware of fitness training in external organisations & **signpost** **Barriers :** Referrals are limited by patient preference & accessibility (minimal audit evidence) .

Staff related factors	Patient related factors	Resources	Service
T1a. Knowledge, skills and expertise	T2a. Severity / disability / physical capabilities	T3a. Resources (including space)	T4a. Service accessibility
T1b. Priorities for therapy	T2b. Stage of recovery (priorities / goal setting)	T3b. Staffing	T4b. Priorities set by the service
T1c. Concerns for patient safety including CV risk	T2c. Communication/cognitive capabilities	T3c. Time	T4c. Awareness of the pathways to fitness training
	T2d. Patient motivation	T3d. Equipment	

Table 1: . Pre coded factors that created to analyse themes and the most prevalent factors affecting implementation of fitness training

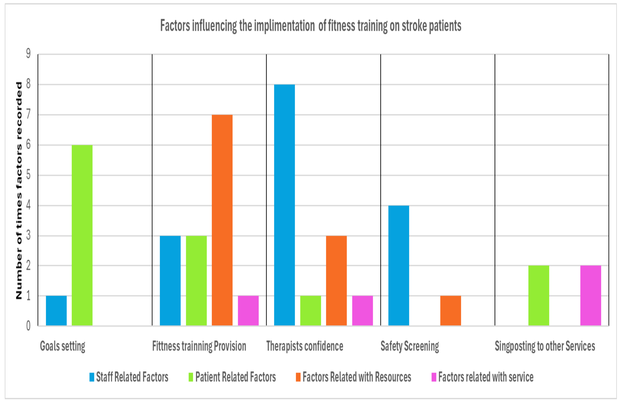

Fig 1: Staff interviews Themes and factors influencing implementation of fitness training on stroke survivors

Fig 2 : Data extracted from medical records indicate that only 2% of therapists documented discussions about cardiorespiratory risks.

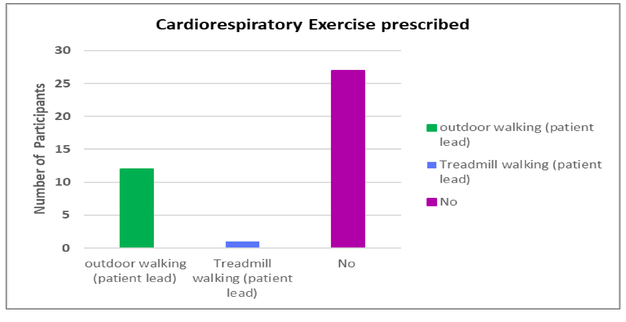

Fig 2 : Data extracted from medical records indicate that only on 12 cases therapists documented prescribed cardiorespiratory .

Conclusions:

Current data demonstrated the HCNRT service is not fully compliant with fitness training for stroke survivors. Our findings demonstrate individualised exercises and activities are prescribed by the therapists but no evidence of progressive cardiorespiratory or strengthening elements. These findings are aligned with previous literature (Boyne et al , 2017).

Data shows physiotherapists at HCNRT use Subjective patient feedback to ensure intensity targets; instead of quantifiable measures such as HR monitor, RPE, SPO2%.

Data shows therapists are also heavily reliant on subjective patient feedback for safety screening prior to exercise prescription

Practice education placements bridge the gap between evidence-based guidelines and clinical practice.

They highlight quick service improvements and engage students in audit and feedback, enhancing service delivery and critical thinking.

This fosters deeper understanding of how national guidelines apply in real-world care.

Students added value to clinical team by the completing project

Collaborative working (students – peer support and wider team collaboration) helps students to develop transferable skillset and engaging in CPD ; links with employability.

References
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