Achieving clinically relevant evidence synthesis: Involvement of patients, carers and clinicians in a Cochrane systematic review leads to development and use of a new taxonomy of physiotherapy treatment approaches for stroke

**Background**

- Cochrane systematic review are widely recognised as providing the best quality evidence in relation to healthcare conditions. However, there is an emerging literature which points to limited success in routinely transferring systematic review evidence into clinical practice.
- Studies have suggested that systematic reviews should emphasise the usefulness of research and clinical practice (Wallace et al., 2012). One approach to overcoming many of these barriers is to actively involve people with a health condition and clinicians.
- Physiotherapy treatment approaches are generally inadequately defined and lack universal international acceptance. In order to achieve a useful synthesis of evidence, with a specific focus on the clinical trial evidence, it was necessary to develop a taxonomy of treatment approaches for stroke, clear and clinically relevant descriptions of treatment approaches must be developed.

**Objectives**

- We aimed to engage key stakeholders in a Cochrane systematic review update (Pollock et al. 2007) of physiotherapy treatment approaches for patients with stroke, in order to ensure clinical relevance of the evidence presented in the review.
- Specific aims were to:
  1. ensure that the method of categorising physiotherapy treatment approaches within the review was clinically relevant, and
  2. determine how evidence from international trials should be incorporated within the review.
- Using an iterative process, these aims led to the development of a new method of categorising and classifying physiotherapy treatment approaches.

**Methods**

- **Stakeholder Group Meetings**
  - A stakeholder group (SG), comprising 13 purposively selected stroke survivors/carers, physiotherapists and educators was convened. Physiotherapists were selected to cover a variety of grades, years of experience, post-graduate courses (e.g. Bobath certificated) and geographical work base (across Scotland).
  - Two SG meetings were held, each with a clearly identified aim, and structured to enable effective discussion and voting on a number of key statements (Figure 1).
  - Nominal group techniques were used to reach consensus on review aims and methods, focusing on clinical relevance.
  - The proportion agreeing with each statement was determined. Consensus decision making was used to record and transcribed verbatim. Qualitative data were coded and analysed using NVivo.

- **Incorporation into Cochrane systematic review**
  - Two independent reviewers coded the individual treatment components, based on the description of the intervention, for each included trial. Any disagreements were resolved through discussion and refined using sensitivity analyses.
  - The categories were used to structure sub-group analyses and the treatment approaches were explored using significance analyses.

**Results**

- **SG Meeting 1**
  - 94% of group members disagreed with statement A, that the current categories [based on disability] are appropriate and clinically relevant.
  - 100% agreed with statement B, that these international trials [which do not fit into the categories of western approaches] should be included in our review of physiotherapy treatment approaches.
  - Nominal group techniques were used to reach consensus on review aims and methods.

- **SG Meeting 2**
  - Twenty-seven individual treatment components were identified and grouped into 7 categories (Table 1).
  - The categories were informed by the taxonomy described by Dejong 2004.
  - 100% agreed with statement A and with statement B that the categories and names were appropriate and clinically relevant.

**User-involvement in this review update:**

- Influenced decision around the classifications of interventions within the review, and ensured relevance and accessibility of the evidence.
- Lead to development of a new taxonomy of physiotherapy treatment approaches, enabling synthesis and analysis of evidence in a clinically meaningful manner, for clinical practice.
- Considerably removed potential biases from the process of reaching conclusions from this review, ensuring that the conclusions reflect the views of expert clinicians, stroke survivors and carers, rather than the potentially-biased viewpoints of researchers and academics.
- Led to development of summaries of evidence which are:
  - "well-tailored, easy to read and the messages and evidence is very clear" (physiotherapist)

**User-involvement in Cochrane systematic reviews:**

- Feasible; valued; and can significantly impact review structure and methods.
- Is perceived to increase the clinical relevance of evidence synthesised within a review.

**Limitations:**

- This taxonomy has been developed specifically for synthesis of interventions described within clinical trials. The relevance to routine practice within clinical settings has not been explored.
- Further research is required to determine the reliability and validity of these components and categories. There were only 13 SG members, and all were from Scotland; acceptance of this taxonomy has not been explored with wider populations.

**Conclusions:**

- This review benefited from user-involvement. We recommend similar models of user-involvement within other Cochrane reviews and evidence syntheses.

**Discussion & Conclusions**

**References**

- Pollock A, Baer G, Pomeroy VM, Langhorne P. Physiotherapy treatment approaches for stroke survivors/carers, physiotherapists and educators was convened. Physiotherapists were selected to cover a variety of grades, years of experience, post-graduate courses (e.g. Bobath certificated) and geographical work base (across Scotland).
- Wallace et al., 2012. One approach to overcoming many of these barriers is to actively involve people with a health condition and clinicians.
- Physiotherapy treatment approaches are generally inadequately defined and lack universal international acceptance. In order to achieve a useful synthesis of evidence, with a specific focus on the clinical trial evidence, it was necessary to develop a taxonomy of treatment approaches for stroke, clear and clinically relevant descriptions of treatment approaches must be developed.
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**Table 1: Categories, treatment components & associated definitions.**

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