

## Assessing treatment fidelity of lay health worker support to increase uptake and completion of pulmonary rehabilitation in COPD

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**Background:** The benefits of pulmonary rehabilitation (PR), the most effective treatment for the symptoms and disability of COPD, are restricted by poor rates of uptake and completion. Lay health workers (LHWs) have been effective in improving access to treatment and services in other settings. A feasibility study of using trained volunteer LHWs, COPD patients who have themselves completed PR, was conducted. This work aimed to assess the fidelity of delivery of the LHW intervention.

**Methods:** LHWs attended a 3-day training programme which included communication, confidentiality and behaviour change techniques (BCT). Interactions between LHWs (n=12) and 24 of 66 people with COPD referred for PR receiving LHW support were recorded, transcribed, coded and analysed. Interactions were rated for treatment fidelity based on a set of predetermined criteria, including delivery of the BCTs taught, and competence metrics.

**Results:** The pace of learning differed between LHWs. The recorded interactions showed that some LHWs might have benefitted from more time to embed their learning. BCTs providing information about 'consequences' and 'credible source' were delivered frequently ( $\geq 79\%$  of interactions), whilst 'goals and planning' interactions were used infrequently ( $\leq 8\%$  of interactions). Inter-rater agreement for coding of both BCTs and competence criteria was high ( $\geq 84\%$ ).

**Conclusions:** The consistency of intervention delivery by different LHWs in their interactions with patient-participants could be improved. It cannot be concluded whether this inconsistency is due to the LHWs' personalised approach to patients, or reflects a true loss of fidelity requiring more intensive training.