



RESEARCH

INFORMATION

Tailored Intervention at home for patients with moderate-to-severe COPD and Co-morbidities by Pharmacists and Consultant Physicians (TICC PCP): pilot randomised controlled trial



AIMS

To generate sufficient information from a pilot randomised controlled trial (RCT) with an embedded economic analysis and qualitative process evaluation, to determine whether there is merit in progressing to a definitive RCT testing Pharmacist prescriber led home visits to people with symptomatic COPD and multimorbidities.



KEY FINDINGS

- In the prospective parallel group, multi-centre RCT (called TICC-PCP):
 - Participant recruitment, retention, intervention delivery and data collection targets were achieved over 21 months;
 - Secondary outcomes included: fewer exacerbations; improved health related quality of life; delayed time to emergency health care contacts; increased prescribing of bone strengthening medicines, de-prescribing of medicines associated with increasing falls risk and fewer falls.
- In the qualitative process evaluation:
 - There were suggestions pharmacists were able to undertake more actions to support patients living in areas of lower socioeconomic status;
 - Overall, intervention and trial procedures were acceptable to patients and stakeholders;
 - Challenges related to: pharmacist recruitment; workload/lone-working; managing patient complexity; and the volume of data collection in the trial.
- In the economic analysis:
 - Healthcare resource use and costs at 12- and 21-month follow-up were higher in the intervention arm.





WHAT DID THE STUDY INVOLVE?

RCT: Phase two multi-centre parallel-group RCT. 110 moderate-severe COPD patients recruited from respiratory out-patient clinics in Glasgow and Lothian. After home-based assessments, participants were randomised to: Usual Care (UC) or UC plus an intervention involving pharmacists repeatedly visiting participants at home for a year, to assess their respiratory and other physical/mental health conditions. This included, for example, pharmacists conducting a structured respiratory examination. Based on the findings, pharmacists used their clinical judgement to prescribe medicines e.g. new inhalers or bone strengthening medicines. They also de-prescribed and referred participants to health and social care services as appropriate, with respiratory physician collaboration.

Researchers visited participants 3 monthly for 21 months to collect data on health and healthcare use.

Qualitative process evaluation explored 20 patients' and 10 stakeholders' perceptions of the intervention, acceptability of trial procedures, and barriers/facilitators to intervention implementation. Economic analysis identified, measured and reported healthcare resource use and costs at follow up.



WHAT WERE THE RESULTS AND WHAT DO THEY MEAN?

Recruitment, follow up, data collection, intervention delivery, qualitative evaluation together suggest there is merit in progressing to a full-scale RCT. The full scale RCT will definitively test whether pharmacy professionals (Pharmacists or Pharmacy technicians/support workers) working closely with consultant respiratory physicians and the primary care team, visiting people at home with COPD and co-morbidities, can reduce respiratory exacerbations, improve health related quality of life, and reduce costs.



WHAT IMPACT COULD THE FINDINGS HAVE?

A subsequent definitive RCT is needed to confirm whether TICC-PCP reduces the individual and societal burden (including costs) of COPD and co-morbidities, particularly for people who are poorer.

If results are favourable, re-organisation of Scotland's extensive and underused Pharmacist independent prescriber or Pharmacy technician/support worker network to target people living at home with COPD and co-morbidities would facilitate rollout at scale and pace.



HOW WILL THE OUTCOMES BE DISSEMINATED?

Protocol paper is published: <https://doi.org/10.1186/s40814-025-01681-x>

Qualitative process evaluation is published: <https://doi.org/10.1371/journal.pone.0326178>

Results paper is in press (npj Primary Care Respiratory Medicine)

Economic analysis is nearing completion



CONCLUSION

Tailored Intervention for people with COPD and Co-morbidities by Pharmacists and Consultant respiratory Physicians, looks promising as a new approach to improving care and reducing costs.

A definitive multicentre RCT is merited, to test whether the intervention delivers as planned.

If Pharmacy professional home-visits and respiratory physician collaboration improves clinical outcomes for people living in areas of socioeconomic disadvantage, Scotland will have a scalable off-the-shelf model of care to address respiratory and wider health inequalities.



RESEARCH TEAM & CONTACT

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