Remote delivery options for self-management programmes for patients with COPD during the COVID-19 pandemic. Uptake, completion and clinical outcomes.

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Introduction: Face-to-face pulmonary rehabilitation (PR) programmes were largely stopped in the UK in March 2020 due to concerns about the transmission of the COVID-19 virus[1]. However there was still a need to support patients with COPD to self-manage their condition. Indeed social isolation and deconditioning were cause for concern in this population[2].

The aim of this work was to gauge the interest in 3 different models of remote self-management support and to explore the uptake, completion and clinical outcomes of these 3 options.

Methods: Pragmatic service evaluation.
Patients on the waiting list for PR and those recently referred were telephoned between March 2020-March 2021. 3 remote options for self-management were offered (figure 1): telephone support (TP: biweekly for 6 weeks with a home exercise and education booklet), SPACE for COPD Manual (SM: with phone calls at week 2 and week 4), SPACE for COPD Website (SW: email prompts and contact healthcare professional [HCP] email function).

All patients had a subjective assessment (including risk assessment) completed over the phone. All programmes included self-management education and a home exercise programme (walking, strength exercises). Outcomes assessed were: uptake and completion rates, COPD Assessment Test (CAT), Chronic Respiratory Questionnaire (CRQ)- all domains. Post-programme assessments were conducted over the phone at 6-8 weeks.

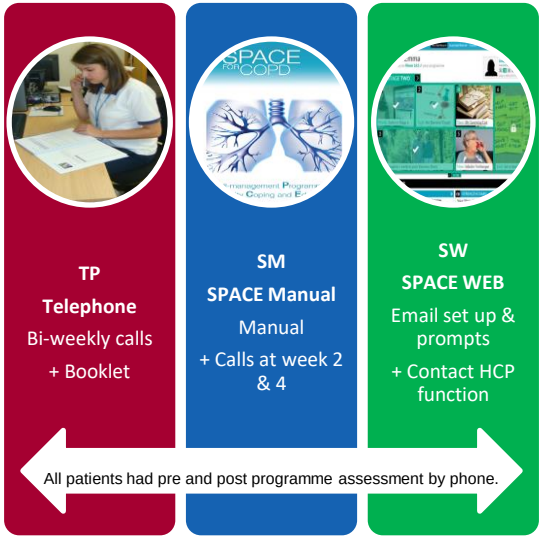

Figure 1. 3 remote self-management options.

Results: Of all referrals during the time period, 22% declined and 12% deferred to wait for a face-to-face PR appointment. N=287 patients chose a remote option and were included in the analysis. All patients had a spirometry diagnosis of COPD. Mean (SD) age 66.4 (10.2) years. 67% chose TP, 22% chose SM, 11% chose SW. Completion rates were: 56% TP, 52% SM and 30% SW (significant $p<0.05$ between TP and SW). Table 1 displays the change in outcomes for the 3 choices for completers only. There were within group improvements for all outcomes, all meeting the clinically relevant thresholds in this population (except for the CRQ-fatigue and emotion domains in the TP group). There were statistically significant changes within a number of outcomes (*) but not between group differences.

Change in…	TP	SM	SW
CAT	-2.4 * C	-3.1 * C	- 7.2 C
CRQ- Dyspnoea	0.8 * C	0.5 * C	1.1 * C
CRQ- Fatigue	0.4 *	0.8 * C	0.9 C
CRQ- Emotion	0.4 *	0.8 * C	1.4 C
CRQ- Mastery	0.6 * C	0.5 C	0.8 C

Table 1: Change in outcomes of the 3 programmes for completers only.
*: Statistically significant $p<0.05$. C: clinically relevant (meets MCID).

Conclusions: Most patients chose bi-weekly telephone support. TP and SM had the highest completion rate. All options were equally effective in terms of clinical outcomes. Despite being clinically effective, more work is needed to promote completion in digitally delivered self-management programmes. The level of supervision from HCP for remote programmes may be key for successful completion.

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