

# Effectiveness of a hybrid home-based PR programme in COPD after an exacerbation-related hospitalisation: preliminary results.

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## Background

Pulmonary rehabilitation (PR) is strongly recommended following hospitalisation for acute exacerbation of COPD. However, less than 10% of these individuals have access to a conventional PR programme within 6 months post hospitalisation.

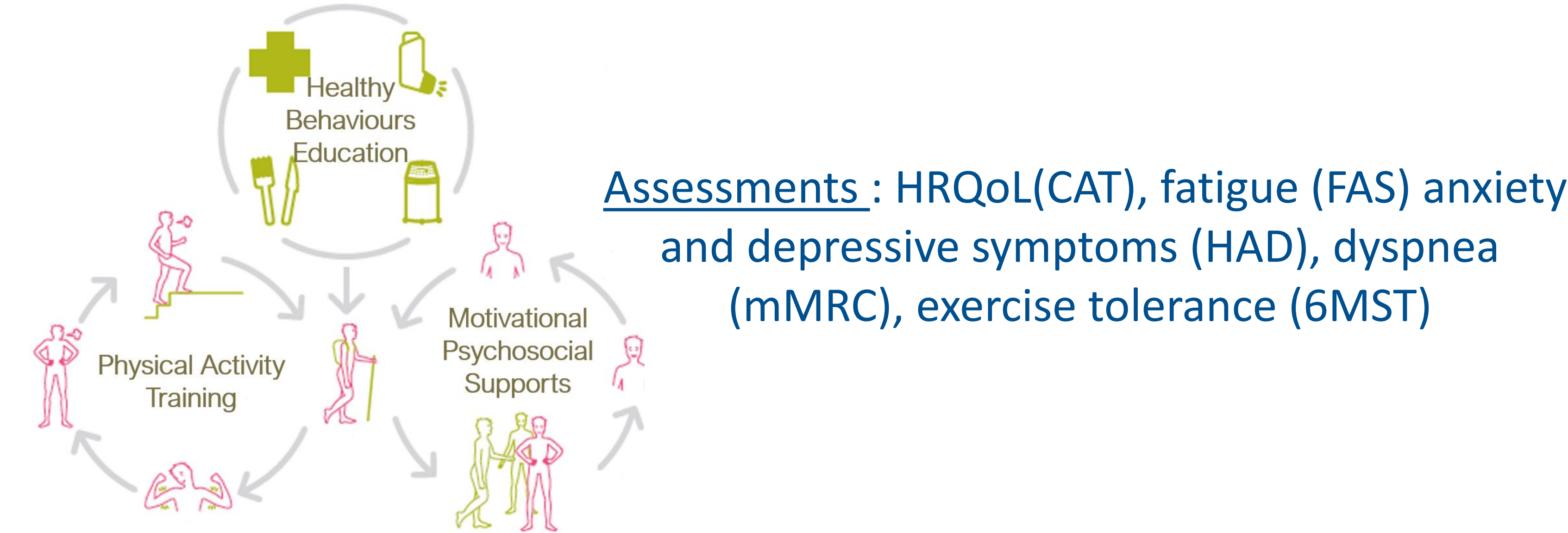
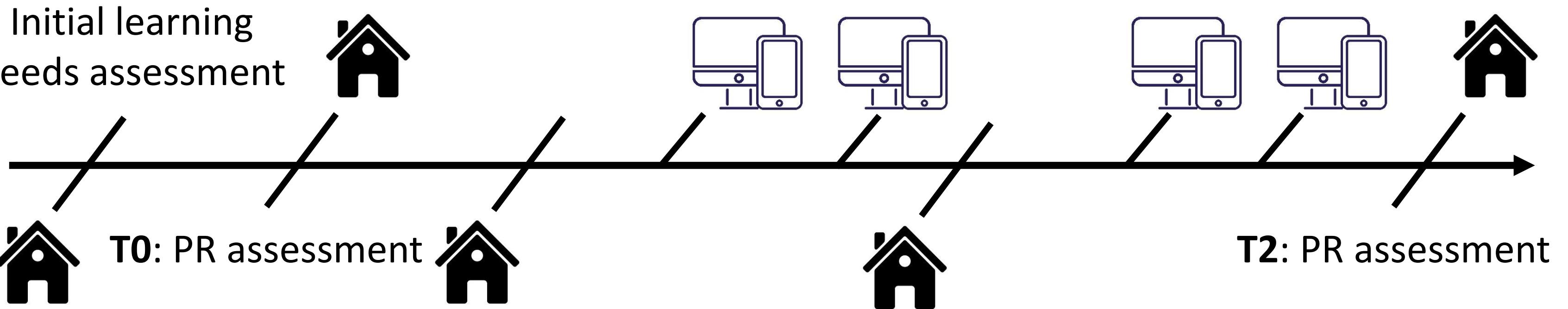
Hybrid PR, combining face-to-face and remotely supervised sessions, is feasible, safe and effective for improving health status, symptoms and exercise tolerance in people with stable chronic respiratory disease.

**Objective:** To evaluate the feasibility and effectiveness of an 8-week hybrid home-based PR programme in patients with COPD discharged from an exacerbation-related hospitalisation..

## Methods

Real-life observational study conducted on prospectively collected and non-selected data from 01/2022 to 03/2023

One weekly supervised 90-minute home session during 8 weeks by a single care manager



# Main Findings

These preliminary results suggest that 8-week of hybrid home-based PR is:

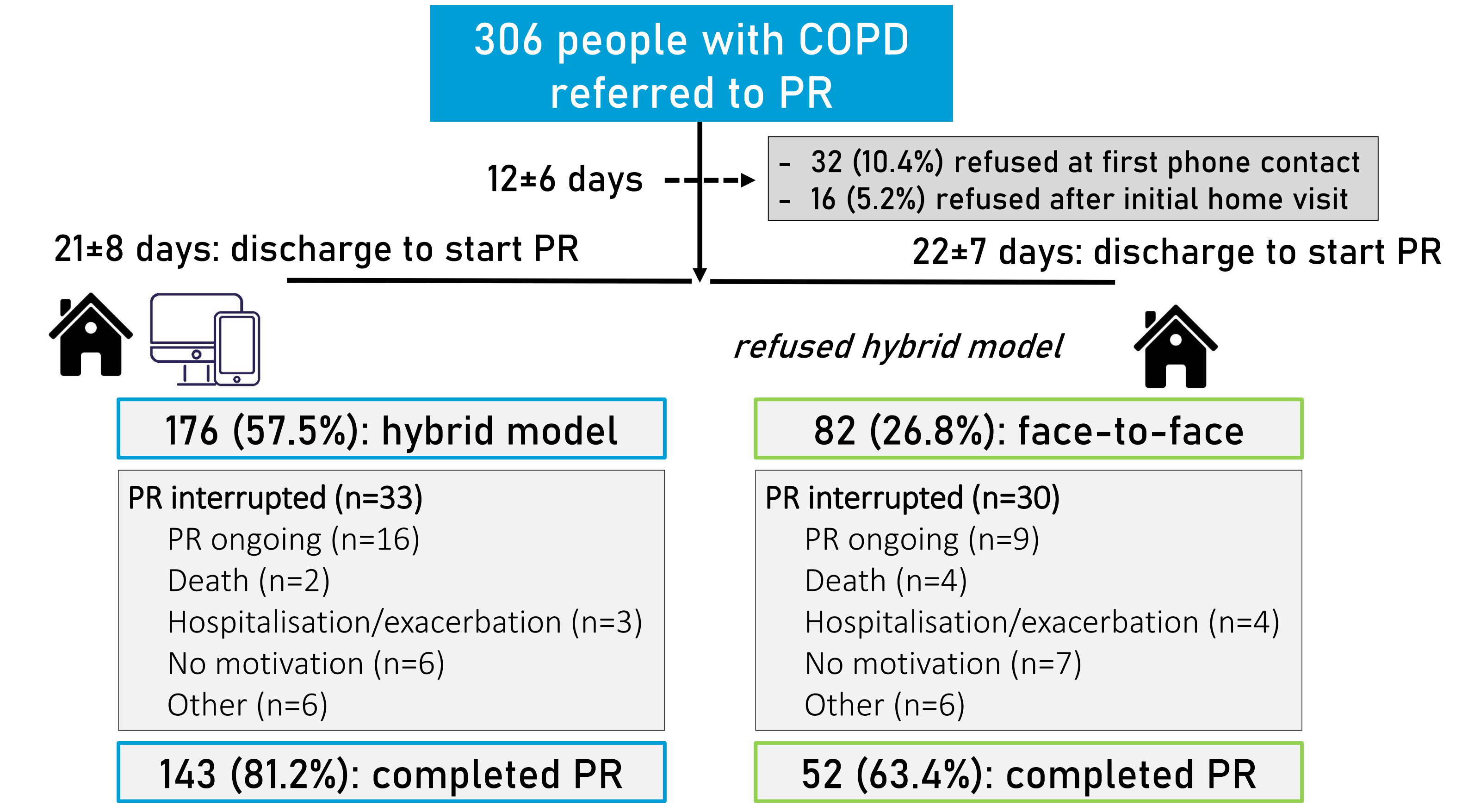
- i) feasible and effective at short-term for improving HRQoL, fatigue, anxiety and depressive symptoms, dyspnea and exercise tolerance in people with COPD discharged from an exacerbation-related hospitalisation;
- ii) not suitable for all patients: 42% declined to participate (15% no to PR, 27% no to hybrid model).

Amongst the 82 people who refused the hybrid PR but accepted 8 face-to-face PR visits, 15% had no internet access, 18% had a visual or auditory disability, 67% declined video. These people were more often male, older, had more comorbidities and dyspnea.

**Hybrid PR programmes offer an effective and accessible alternative to conventional centre-based programmes for less fragile people with COPD who have been recently discharged.**

*"I did not have to go to a rehab centre for 4 or 5 weeks, away from my family. The point is that you can get care easily, care comes to you." (female patient)*

## Results



Baseline characteristics	Hybrid n=176	Face-to-face n=82	p-value
Age, years	64.4 ± 9.7	70.1 ± 8.9	<0.001
Sex, male n (%)	98 (55.7)	58 (70.7)	0.021
BMI, kg/m <sup>2</sup>	25.5 ± 7.0	24.3 ± 6.1	0.183
FEV <sup>1</sup> , % of predicted	38.3 ± 19.2	42.5 ± 20.8	0.141
Long-term oxygen therapy, n (%)	97 (55.1)	48 (60.7)	0.541
Non-invasive ventilation, n(%)	43 (24.8)	15 (19.0)	0.306
Comorbidities 3 or more, n (%)	99 (56.2)	56 (68.3)	0.041
<b>Baseline assessments</b>			
CAT, score (0-40)	22.6 ± 7.4	22.7 ± 7.6	0.925
FAS, score (10-50)	27.3 ± 8.3	28.6 ± 8.3	0.264
Anxiety symptoms, score (0-21)	9.8 ± 4.1	9.3 ± 4.6	0.403
Depressive symptoms, score (0-21)	7.9 ± 4.5	8.1 ± 4.1	0.765
mMRC, score (0-4)	2.99 ± 1.01	3.27 ± 0.84	0.035
6MST, strokes	323 ± 140	282 ± 106	0.080

Assessments	Hybrid n=143		Face-to-face n=52	
	M2	ΔM2 - M0	M2	ΔM2 - M0
CAT	19.2 ± 8.3	-3.3 [-4.4 to -2.2]	20.1 ± 7.1	-2.1 [-3.9 to -0.3]
FAS	23.7 ± 8.7	-3.4 [-4.5 to -2.3]	26.1 ± 7.6	-1.7 [-3.5 to 0.1]
HAD_Anxiety	8.2 ± 3.9	-1.5 [-2.0 to -1.0]	8.5 ± 4.2	-0.3 [-1.2 to 0.5]
HAD_Depressive	5.7 ± 4.4	-2.2 [-2.7 to -1.6]	6.2 ± 3.7	-1.2 [-2.2 to -0.3]
mMRC	2.47 ± 1.07	-0.46 [-0.58 to -0.33]	2.98 ± 0.91	-0.31 [-0.53 to -0.10]
6MST *	401 ± 170	64 [46 to 81]	353 ± 115	32 [-6 to 71]

Data are presented as mean (SD) or mean [95%CI].  
 \* Sample size was 103 vs 21 participants in the hybrid and face-to-face groups, respectively.  
 The hybrid group improved all the outcome (+CAT, HAD, 6MST clinically improved). Face-to-face group did not improve FAS, Anxiety symptoms, 6MST.

