

Supplementary Online Content

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eTable 1. Baseline Characteristics of PIC Enrollees.

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Baseline Characteristics of PIC Enrollees.

Characteristic	Enrollees N = 100	Completers N = 82	Non- Completers N = 18	P-value^a
Age, mean (SD), y	68.0 (8.7)	67.0 (8.1)	72.6 (9.9)	0.01
Education, mean (SD), y	13.8 (3.0)	14.0 (2.8)	12.8 (3.9)	0.22
Sex (%), F	46.0	46.3	44.4	0.88
Race (%), Non-Caucasian	7.0	4.9	16.7	0.11
BMI, mean (SD), kg/m ²	27.2 (6.4)	28.0 (6.6)	23.8 (3.5)	<0.001
FEV ₁ % predicted, mean (SD)	43.1 (17.2)	43.2 (17.5)	42.7 (16.4)	0.92
Current Smoker (%)	24.0	24.4	22.2	0.99
Pack-Years of Tobacco, mean (SD)	52.8 (34.8)	55.3 (36.3)	40.5 (24.0)	0.12
LTOT (%)	59.0	61.0	50.0	0.39
Resting SpO ₂ , mean (SD), % ^b	92.1 (4.0)	92.4 (3.5)	90.4 (5.8)	0.18
Exercise SpO ₂ , mean (SD), % ^b	85.5 (6.9)	85.7 (6.4)	84.7 (8.8)	0.57
Pulm Rehab (%) ^c	9	11	0	0.36
<u>Inhaled Medications</u>				
LAA (%)	34.0	37.8	16.7	0.09
LABA (%)	50.0	53.7	33.3	0.12
ICS (%)	57.0	58.5	50.0	0.51

Abbreviations: LTOT = long term oxygen therapy, LAA = long-acting anti-cholinergic, LABA = long-acting beta-agonist, ICS = inhaled corticosteroid, SpO₂ = pulse oximetry oxygen saturation.

^aP-values shown for the comparison between Completers and Non-Completers.

^bOxygen saturation was measured by pulse oximetry during a 6-minute walk, with resting saturation (Resting SpO₂) measured at the beginning of the walk and post-exercise saturation (Exercise SpO₂) measured at the end of the walk.

^cSubjects were considered to have participated in pulmonary rehabilitation (Pulm Rehab) if they were attending a program at enrollment or had ever attended a program in the past.

eTable 2. Effect of Various PIC Components on Change in Total SGRQ.

Variable	Mean (N) Change in SGRQ for Same Usage	Mean (N) Change in SGRQ for Improved Usage	Unadjusted Difference^a	P- value	Adjusted Difference^b	P- value
SABA	-11.0 (63)	-13.6 (19)	-2.6	0.35		
LABA	-9.2 (64)	-20.8 (17)	-11.6	0.002	-10.3	0.03
SAA	-11.1 (73)	-0.3 (2)	10.8	0.14	5.4	0.38
LAA	-10.2 (65)	-15.9 (16)	-5.7	0.04	-2.9	0.35
ICS	-9.7 (64)	-18.9 (17)	-9.1	0.01	1.8	0.70
LTOT	-10.7 (73)	-18.2 (8)	-7.5	0.052	-5.2	0.15
SpO ₂ ≥ 90%	-11.6 (66)	-11.9 (6)	-0.4	0.93		
Change in 6MWD, m			-0.04	0.01	-0.06	0.000 8

Abbreviations: SGRQ = St. George's Respiratory Questionnaire, SABA = short-acting beta agonist, LABA = long-acting beta agonist, SAA = short acting anti-cholinergic, LAA = long acting anti-cholinergic, ICS = inhaled corticosteroid, LTOT = long term oxygen therapy, SpO₂ = pulse oximetry oxygen saturation.

^aUnivariable analysis considering each variable separately. For change in 6MWD, the mean additional change in SGRQ for each additional change in 6MWD in simple linear regression is shown as difference. For other variables, the mean difference in change in SGRQ between same usage (i.e. used both at baseline and follow-up, or not used in either period) and improved usage (i.e. not used at baseline but used at follow-up) in t-tests is shown.

^bRegression coefficient (beta) in multiple linear regression considering variables (with p < 0.15 in univariable analysis) together.

eTable 3. Flags Occurring during COPD Exacerbations.

Flags	Yellow or Red Flags (No)
Shortness of breath	14
SpO ₂ decline	13
Activity difficulties	12
Cough/Sputum	11
6MWD	9
FEV ₁	5
Wheeze past 48 hours	4

Abbreviations: SpO₂ = pulse oximetry oxygen

saturation, 6MWD = 6 minute walk distance.

eTable 4. Definitions of Flags for Exacerbation Signs and Symptoms.

Flags	Green	Yellow	Red
Shortness of breath	None	With activity	At rest
<u>Cough</u>	None/Usual	More than usual	See sputum or fever
Sputum	Usual/White	Yellow	Green/Red/Brown
Fever	$\leq 101.5^{\circ}\text{F}$		$>101.5^{\circ}\text{F}$
Wheeze in past 48 hours	No	Yes	
Activity difficulties	None	Some	Yes
FEV ₁ (% below baseline)	0-14	15-24	≥ 25
6MWD	Walked	No walk ≤ 1 day	No walk > 1 day
Resting SpO ₂ (%)	≥ 90	88-89	≤ 87
Post-exercise SpO ₂ (%)	≥ 90	88-89	≤ 87

Abbreviations: 6MWD = 6 minute walk distance, SpO₂ = pulse oximetry oxygen saturation.