**Supplementary Tables**

**Supplementary Table 1.** Correlation of overall correct inhaler usage rate and other factors

|  **Factors (n)** | **Mean (%)±SD** | **F** | **p value** |
| --- | --- | --- | --- |
| Age (years) | ≥65 (610) | 89.60±11.559 | 0.293 | 0.588 |
|  | <65 (80) | 90.34±11.423 |  |  |
| Gender, N (%) | Male (659) | 90.23±11.406 | 0.024 | 0.877 |
|  | Female (33) | 90.54±12.306 |  |  |
| Mean BMI (kg/m2)  | BMI <21 (300) | 90.53±11.149 | 0.376 | 0.540 |
|  | BMI ≥21 (391) | 89.99±11.673 |  |  |
| CAT severity (points) | 0-9 (62) | 91.86±11.828 | 1.362 | 0.244 |
|  | ≥10 (630) | 90.08±11.400 |  |  |
| mMRC severity (points) | 0-1 (594) | 90.12±11.526 | 0.469 | 0.494 |
|  | 2-4 (98) | 90.97±10.947 |  |  |
| COPD group | B (373) | 89.71±11.717 | 0.876 | 0.417 |
|   | C (275) | 90.85±11.046 |  |  |
|  | D (44) | 90.93±11.538 |  |  |
| Smoking status | Current smoker (516) | 89.52±11.758 | 4.206 | 0.088 |
|  | Ever-smoker (79) | 92.86±10.563 |  |  |
|  | Never-smoker (97) | 91.95±9.929 |  |  |
| Comorbidities | Yes (549) | 90.06±11.469 | 0.693 | 0.405 |
|  | No (143) | 90.95±11.344 |  |  |
| Blood eosinophil count (cells/μL) | < 300 (41) | 89.41±12.510 | 1.214 | 0.298 |
|  | ≥ 300 (457) | 90.728±11.067 |  |  |
|  | no data (194) | 90.24±12.050 |  |  |
| Inhaler numbers, N | 1 (281) | 90.01±11.531 | 0.397 | 0.672 |
|  | 2 (396) | 90.32±11.452 |  |  |
|  | ≥3 (15) | 92.65±9.688 |  |  |
| Inhaler device | Breezhaler® (37) | 92.47±11.107 | 0.632 | 0.595 |
|  | Ellipta® (227) | 89.70±11.870 |  |  |
|  | Evohaler® (151) | 90.11±11.815 |  |  |
|  | Respimat® (212) | 90.30±11.009 |  |  |
| Pneumococcal vaccination | Yes (247) | 90.25±11.302 | 0.000 | 0.984 |
|  | No (445) | 90.24±11.531 |  |  |
| Flu vaccination | Yes (489) | 90.70±11.195 | 2.647 | 0.104 |
|  | No (203) | 89.15±11.971 |  |  |
| Pulmonary rehabilitation | Yes (263) | 90.19±11.432 | 0.010 | 0.922 |
|  | No (469) | 90.28±11.460 |  |  |

Acronyms:

BMI: body mass index; COPD: chronic obstructive pulmonary disease; mMRC: modified Medical Research Council Dyspnea scale; FEV1: forced expiratory volume in 1 second; FVC: forced vital capacity; LABA: long-acting beta-agonists; LAMA: long-acting muscarinic antagonist; ICS: inhaled corticosteroid.

**Supplementary Table 2.**  Outcome measures at baseline and end of study

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Outcome Measure** | **n** | **Mean (± SD) or Median****(range) or n (%)****Standard care group** | **n** | **Mean (± SD) or Median****(range) or n (%)****Intervention group** | **p value** |
| Mean CAT score* Baseline
* End of study
 | 574574 | 18.6 ± 4.717.9 ± 4.5 | 118118 | 17.8 ± 5.717.0 ± 5.1 | 0.344 |
| Mean mMRC score* Baseline
* End of study
 | 574574 | 1.6 ± 0.71.5 ± 0.7 | 118118 | 1.7 ± 0.81.6 ± 0.8 | 0.875 |
| Flu vaccination (n (%))* Baseline
* End of study
 | 574574 | 402 (70.2%)430 (74.9%) | 118118 | 87 (73.7%)91 (77.1%) | 0.314 |
| Pneumococcal vaccination (n (%))* Baseline
* End of study
 | 574511 | 202 (35.2%)223 (38.6%) | 118118 | 45 (38.8%)51 (43.2%) | 0.315 |
| Smokers (n (%))* Baseline
* End of study
 | 574574 | 435 (75.8%)422 (73.5%) | 118118 | 81 (68.6%)79 (67.5%) | 0.980 |
| Pulmonary rehabilitation (n (%))* Baseline
* End of study
 | 574443 | 217 (37.8%)252 (43.9%) | 118111 | 44 (37.9%)52 (44.1%) | 0.317 |
| Percentage of correct steps of inhaler usage* Baseline
* End of study
 | 574574 | 88.9% ± 9.7889.7% ± 11.6 | 118118 | 91.4% ± 11.493.0% ± 10.2 | 0.632 |

Acronyms:

CAT: COPD assessment test; COPD: chronic obstructive pulmonary disease; mMRC: modified Medical Research Council Dyspnea scale