Table S2. Additional patient characteristics, clinical interventions and outcomes. Estimations at patient level and at hospital level.

| Variables | At patient levelN=5.178 | At hospital levelN=129 |
| --- | --- | --- |
| N | %/Median(IQ limits) | Group data median | IQlimits | Range limits |
| Before admission |
| Smoking statusCurrent smokerEx-smokerLifelong non-smoker | 4500 | 30655 | 29652.1 | 22-3856-730-7 | 0-640-860-38 |
| ComorbidityCardiovascular disease Heart failure Diabetes Mellitus Solid tumour | 5178 | 31222613 | 30202512 | 23-3811-2919-337-17 | 0-870-540-630-33 |
| Performance StatusMild limitation (0-2) Severe-very severe limitation (3-4) | 3485 | 4951 | 3037 | 17-4418-53 | 0-920-89 |
| Body Mass Index≤29>29 | 1931 | 6337 | 5632 | 0-700-46 | 0-1000-100 |
| Social circumstancesLives in own homeResidential or nursing home | 3376 | 919 | 928 | 87-1000-13 | 0-1000-67 |
| Spirometry previous to admissionNo obstruction (FEV1/FVC>70) Mild-moderate (Gold I-II) Severe-very severe (Gold III-IV) FVC, litresFVC % FEV1, litres FEV1 % FEV1/FVC % | 419125522552255224742593253327382579 | 731027632.2(1.7-2.7)64(51-77)1.1(0.8-1.4)42(32-55)51(42-62) | 63520530.09900.099691 | 42-760-128-3037-650.06-0.170-1000.07-0.184-10069-100 | 0-1000-560-1000-1000-0.10-1000-0.10-1000-100 |
| At admission |
| COPD as principal diagnosis | 5178 | 81 | 86 | 74-94 | 24-100 |
| Treatment in seven days before admission | 4491 | 76 | 85 | 66-93 | 5-100 |
| Anthonisen criteriaType I Type II Type III | 5178 | 432730 | 422631 | 33-5019-3223-40 | 7-1000-500-91 |
| Heart rate | 4366 | 94(81-105) | 94 | 90-100 | 73-112 |
| Respiratory rate | 2452 | 24(20-28) | 24 | 20-28 | 14-35 |
| Blood pressureHigh (SBP≥140 or DBP≥90) Low (SBP≤90) | 4585 | 482 | 500 | 43-560-3 | 0-1000-17 |
| Pedal oedema, % | 5178 | 26 | 26 | 19-33 | 0-53 |
| Arterial blood gases takenRatio PaO2/FiO2Bicarbonate | 46274628 | 257(219-295)28(25-31) | 25228 | 242-27027-29 | 143-32921-37 |
| Ratio PaO2/FiO2>300200-300<200 | 4627 | 246116 | 206115 | 13-3253-699-22 | 0-630-920-100 |
| Microscopy or sputum culture % | 5178 | 26 | 17 | 8-40 | 0-85 |
| During admission |
| Audit involvement of the patient’s physician on charge | 5178 | 15 | 13 | 2-27 | 0-100 |
| Oxygen therapyControl pulse-oximetry | 5178 | 9684 | 93 | 73-100 | 0-100 |
| Acidosis (pH< 7.35) at any time during admissionSecond set of arterial blood gasesOxygen after a pH<7.35 | 5178781529 | 196890 | 1750100 | 12-2730-7592-100 | 0-670-1000-100 |
| Ventilatory supportNon-invasive | 5178582 | 1193 | 119 | 4-183-17 | 0-670-56 |
| Serum albumin levels (g/l)≤3.5>3.5 | 1669 | 3.7(3.3-4.0)3961 | 26811 | 1-610-210-36 | 0-1000-950-76 |
| Blood creatinine level (mmol/l)≤1.20>1.20 | 4677 | 1.05(0.8-1.2)7822 | 957921 | 88-10071-8713-29 | 33-10050-1000-50 |
| Anaemia (Hb<13.2 g/dl male, <12.2 female) | 4681 | 31 | 30 | 22-39 | 0-64 |
| Leucocytosis (>11.000) | 4680 | 50 | 50 | 40-57 | 14-100 |
| Long-acting ß2 agonist | 5178 | 34 | 29 | 11-56 | 0-100 |
| Long-acting muscarinic antagonist | 5178 | 20 | 10 | 3-29 | 0-79 |
| Methylxanthines | 5178 | 11 | 9 | 3-20 | 0-75 |
| Antioxidants | 5178 | 31 | 26 | 13-47 | 0-84 |
| At discharge |
| Discharge to own home | 4919 | 93 | 88 | 82-92 | 25-100 |
| Short-acting ß2 agonist | 4919 | 51 | 43 | 30- 65 | 0-100 |
| Short-acting muscarinic antagonist | 4919 | 24 | 23 | 12-34 | 0-67 |
| Methylxanthines | 4919 | 11 | 9 | 3-18 | 0-50 |
| Antioxidants | 4919 | 27 | 20 | 10-36 | 0-75 |
| Discharge report with information on:Inhaler technique instructions Anti-tobacco instructions in active smokersNutritional instructionsProgrammed visit after dischargeInfluenza vaccination instructionPneumococcal vaccination instructions Pulmonary rehabilitationExerciseDiet | 49194919128849194919491949194919491949194919 | 1346889 (50)9551839 | 643588 (53)4031032 | 0-1923-630-1279-94 (37-70)0-120-60-62-2519-49 | 0-1000-1000-9124-100 (0-100)0-910-910-700-900-95 |
| 90 days follow up since admission |
| Number of readmissions | 4919 | 1(1-2) | 1 | 1-1 | 1-3 |
| Readmissions with exacerbation in 90 daysReadmissions within 6 weeks | 4919 | 28(60) | 261 | 18-331-1 | 0-541-3 |
| Total death within 90 days since admission | 5178 | 11.6 | 12 | 8-15 | 0-50 |

N: Number of cases that reported data. IQ: interquartile. FVC: forced vital capacity. FEV1: forced expired volume in the first second. SBP: systolic blood pressure. DBP: diastolic blood pressure. Hb: Haemoglobin