

Supplementary Table 1 Observing variables of the ACURE study

Data module	Variable
Baseline Survey	
Medical history	Demographic data Symptoms of the current AECOPD before hospitalization Potential stimulus of the current AECOPD Treatment against exacerbation before hospitalization Age of first diagnosis of COPD Frequency of hospitalization Respiratory symptoms Disease history other than COPD History of surgery COPD management at stable stage Preventive medicine use Allergic history and occupational exposure history Tobacco exposure
Physical examination	Weight and height Heart and breath frequency Blood pressure and body temperature
Inpatient diagnosis	AECOPD confirmation Comorbidities: respiratory, cardiovascular, metabolic, digestive, cancer, anxiety/depression, etc.
Questionnaires	PEACE CAT and mMRC
Medical examinations	Pulmonary function test: FEV1, FVC, IC, VC, FRC, RV, TLCO, DLCO Blood gas analysis (record oxygen therapy and ventilation): pH, PaO <sub>2</sub> , HCO <sub>3</sub> , Lac CT: diagnosis, photographic images stored with original size Echocardiography: diagnosis with LVEF, PASP V/Q SPECT: diagnosis Lower extremity venous ultrasound: : diagnosis ECG Pathogen examination Serology and urine antigen examination Lab test: WBC, NE%, LY%, EO%, RBC, HCT, PLT, NE, LY, EO, HGB; ALB, CHOL, AST, TBIL, ALP, BUN, Ca, Na, Glu, LDH, TG, ALT, DBIL, γ-GT, Cr, Cl, K, CK, PCT, hs-CRP, ESR, Fbg, NTproBNP, D-dimer, HbA1C, Total-IgE, hs-cTnT, hs-cTnl
Treatment	Medicine Route of administration Dose Starting/end date

Endpoint measurement	AECOPD controlled, discharge upon request,
Diagnosis at discharge	Cause of death AECOPD confirmation Comorbidities: respiratory, cardiovascular, metabolic, digestive, cancer, anxiety/depression, etc.
RICU/ICU stay	Ventilation types, duration Vasoactive drug use
Costs	Health insurance type Direct healthcare cost
Follow-up survey	
Endpoint measurement	Death
AECOPD recurrence	Cause of death Recurrence: severity assessment Newly diagnosed comorbidities
Re-admission	Re-admission date and duration
Treatment	Medicine Route of administration Dose Starting/end date Non-pharmacological treatment
Medical examinations	Pulmonary function test: FEV1, FVC, IC, VC, FRC,RV,TLCO, DLCO CT: diagnosis, photographic images stored with original size
AECOPD assessment	Dyspnea Sputum Upper respiratory tract infection Fever Wheezing Cough Breath rate or pulse rate
Scales and questionnaires	CAT and mMRC SGRQ HADS

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