

SUPPLEMENTARY INFORMATION

Factors Associated with Inpatient Length of Stay among Hospitalized Patients with Chronic Obstructive Pulmonary Disease, China, 2016-2017: a retrospective study

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Supplementary Figure S1- Flow chart of data cleaning process

Supplementary Table S1- Observational studies on LOS and risk factors in patients admitted for COPD

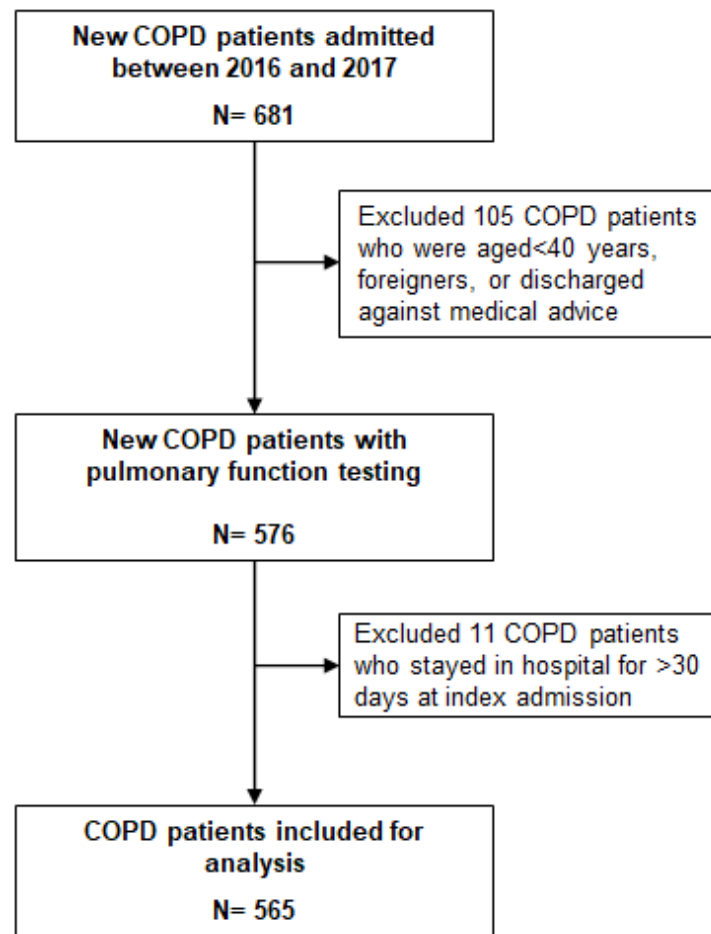


Figure S1- Flow chart of data cleaning process

Table S1. Observational studies on LOS and risk factors in patients admitted for COPD ^a

Countries/regions	Years for LOS	Study patients	LOS	Risk factors for longer LOS
Thirteen European countries ¹	Oct.-Dec.2010; Jan.-Feb. 2011	Exacerbated COPD patients in Europe	Median (IQR): 7 (4-11) days	Clinical severity, treatment
UK ²⁻⁵	2006-2010	COPD patients registered with London general practitioners aged ≥45 years	Mean: 8.2 days in 2006 and 7 days in 2010	Age, hospital and community factors
	Apr.1st, 2005- Mar.31st, 2010	COPD patients aged ≥40 years in Blackpool, UK	Median: 6 days Mean: 9.8 days	Age, deprivation, Charlson index, specialty of admission, and cause of exacerbations
	Mar. 2007- Apr. 2008	65 AECOPD patients	Median: 5 (1-27) in normal eosinophils and 8 (2-61) in eosinopenia	Eosinopenia
	Mar. 2015-Mar. 2016	99 COPD patients admitted to department of pulmonary medicine at Landspítali National University hospital	9 days	No clear association between energy or protein intake and LOS
Norway ⁶	March 2006-December 2008	Patients discharged after COPD at Oslo University hospital in Norway	Median: 6 (3.5-11) days	Admission between Thursday and Saturday, heart failure, diabetes, stroke, high arterial PCO ₂ , and low serum albumin level were associated with LOS>11 days. ^b

Countries/regions	Years for LOS	Study patients	LOS	Risk factors for longer LOS
Italy ⁷	2010	269 COPD patients in a respiratory rehabilitation unit in Italy	Mean ±SD: 31±17 days	Comorbidity, age, invasive procedure, disability, admission provenance predicted longer stay (≥ 30 days) ^b
Portugal ⁸	Jan-Jun., 2016	242 diabetic patients with AECOPD or community acquired pneumonia	Median: 10 days (min-max, 1-66)	LOS was positively correlated with glycemic variability
Spain ⁹	Jun. 2008-Sep. 2010	AECOPD patients visiting emergency department in Spain	-	Baseline dyspnea, physical activity level, and hospital variability
US ^{10,11}	Jan. 1st, -Dec. 31st, 2016	3399 COPD patients with LOS ≤60 days in Premier healthcare database	Mean ± SD: 11.64±9.40 days	Comorbidity (congestive heart failure, fluid and electrolyte disorders, renal failure) were associated with longer stay
	Oct. 1st, 2008- Sep. 30th, 2010	25301 COPD patients admitted to veteran affairs health care system	Mean ± SD: 4.2±2.7 days for weekend discharged patients, 5.4±4.9 days for weekday discharged patients	Fewer weekend discharges was associated with longer stay.
Australia ¹²	2007	172 AECOPD patients	7.8 days in patients with diabetes, 6.5 days in patients without diabetes	Patients with diabetes had increased LOS, but differences were not statistically significant after adjustment for covariates.
China ^{13,14}	Mar. 2013-Aug.2016	346 AECOPD patients in a tertiary hospital in Hongkong, China	Median (IQR): 5 (7) days	An eosinophil value of <0.144 × 10 ⁹ /L on admission or <2% was associated with

Countries/regions	Years for LOS	Study patients	LOS	Risk factors for longer LOS
				longer hospital LOS (≥ 5 days) for AECOPD ^b
	January-June, 2014	81 exacerbated COPD patients in a hospital in Anhui, China	Mean \pm SD: 9.6 \pm 4.1 days	Respiratory infection was associated with LOS

^a we conducted a literature review by searching literatures in the following database: Medline, Embase, Pubmed and Web of Science. We searched observational studies that focused on risk factors of longer hospital stay at index admission in COPD inpatients. Terms used in search were: "Chronic obstructive pulmonary disease", "COPD", "hospitalization", "length of stay", "LOS", and "hospital stay". Published years ranged from 2000 to 2019. Study types included prospective study, retrospective study, cohort analysis or observational study. We also searched the references in retrieved papers for supplement studies that may be missed during the search

^b In risk factor analysis, LOS was categorized into a binary variable.^{6,7,13}

AECOPD=acute exacerbation of COPD; UK=United Kingdom; US=United States

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