

Table S1.

Codes from DREAM database and which are treated as part of workforce and which are considered permanent detachment. Codes are from DREAM version 39.

Working	Unemployed
"" = part of the workforce	"111-114 or 130-140 or 143-149" or "151-153" or "211-218" or "231" or "299" "720-739" = unemployment benefit
"121-123" = holiday benefits	"124-126" = vacation benefit for unemployed
"412" = Leave of absence	"700-719" unemployment benefit for immigrants
"413" = Educational leave of absence	"750-768" Revalidation benefit
"511" = service job	Sick Leave
"521" = Adult apprentice	"810-818 or 870-878" = workforce ability benefit
"522" = Rotation substitute	890-899" = sick leave
"651-652" = State educational support	Early retirement
"661" = Adult state educational support	"740-748 or 771 or 774" = "Flex Job"
"881" = Maternity leave	"781" = Sheltered job
	"783" = Early retirement

Benefit descriptions:

Holiday benefits = payment received during holiday while currently employed; leave of absence = Leave of absence from the workforce, Educational leave of absence = leave of absence from education system; "Service job, adult apprentice and rotation substitute = support requires employment; "State educational support and adult state educational support = payment received while studying; maternity leave = public support during maternity leave; Flex Job = benefit available to people with greatly impaired working ability who have work at greatly reduced time; sheltered job = only available to people receiving early retirement; unemployment benefit = benefit available to unemployed; vacation benefit unemployed = benefit available during vacation during unemployment; unemployment benefit for immigrants = unemployment benefit available to not Danish nationals; revalidation benefit = benefit available while being evaluated for potential reschooling with the prospect of full or partial return to work; workforce ability benefit= benefit requiring inability to work due to illness when being evaluated for work ability.

Table S2. Table with ICD-10 codes used to define amount of comorbidity and specific comorbidities.

DIAGNOSIS CODES	ICD-10 codes	Medication (ATC-code)
Ischemic heart disease	I20, I21, I23-25	
Cardiac insufficiency	I42 (excluding I428B), I43, I50, I099, I110, I130, I132, I255	
Atrial fibrillation/flutter	I48	
Cerebrovascular disease	I60-I69, G45, G46, H340	
Pulmonary fibrosis	J84, J631, J633, J635, J628A, J638A, J638B, J701, J703	
Peptic ulcer	K25-K28, K221	
Diabetes	E101-E148	A10
Chronic renal failure	N032-N037, N052-N057, Z490-Z492, N18, N19, N26, I120, I131, I132, N250, Z940, Z992	
Cancers + lymphoma + leukaemia	C00-C26, C30-C33, C37-C41, C43, C45-C58, C60-C76, C77-C80, C81-C85, C88, C90-C97 (excluding C398 and C399)	
Pulmonary cancer	C34, C398, C399	
Anxiety	F41	N05B
Depression	F32	N06A

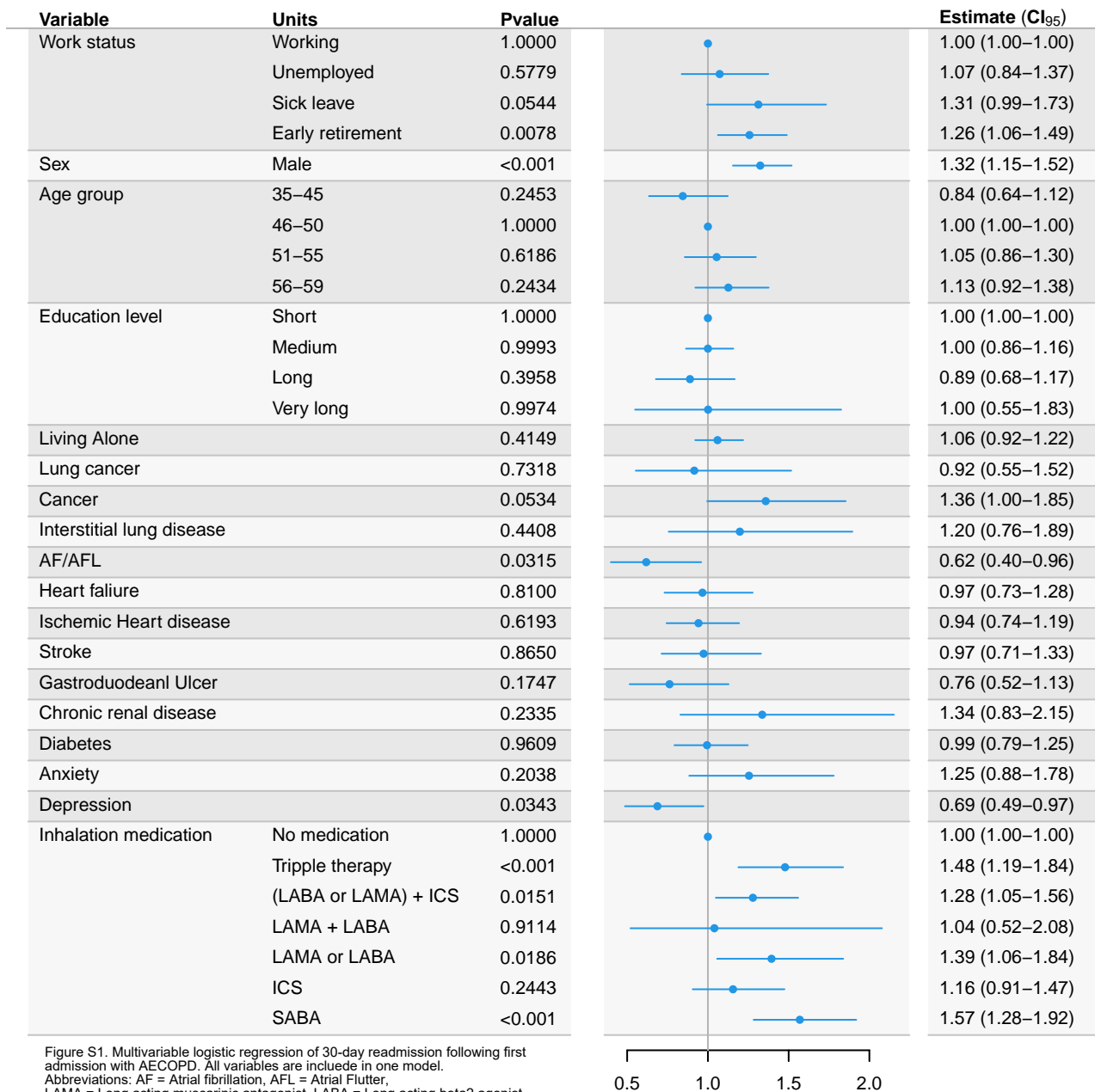


Figure S1. Multivariable logistic regression of 30-day readmission following first admission with AECOPD. All variables are include in one model. Abbreviations: AF = Atrial fibrillation, AFL = Atrial Flutter, LAMA = Long acting muscarinic antagonist, LABA = Long acting beta2 agonist, ICS = Inhaled corticosteroids, SABA = Short acting beta2 agonist

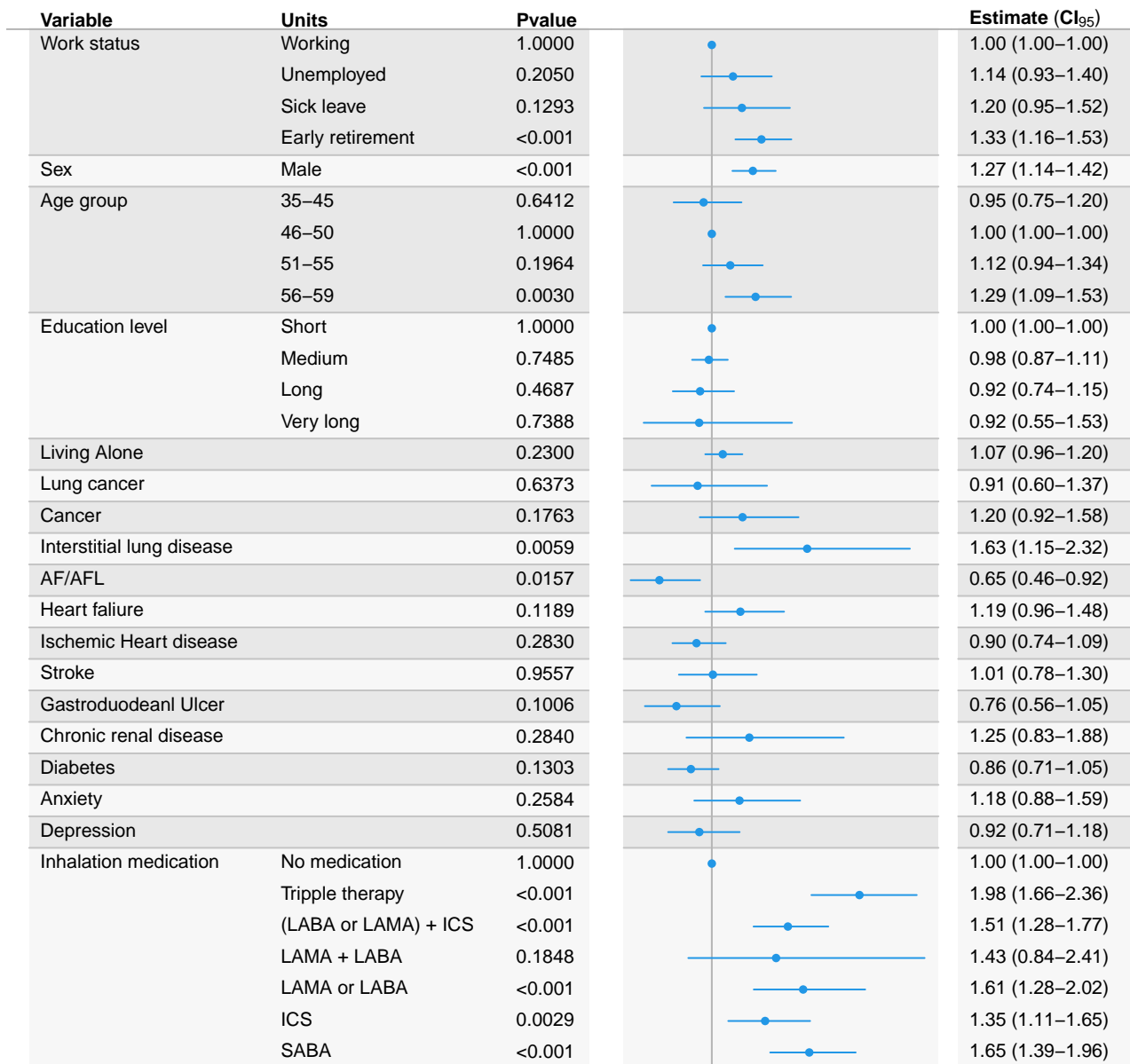


Figure S2. Multivariable logistic regression of 90-day readmission following first admission with AECOPD. All variables are included in one model. Abbreviations: AF = Atrial fibrillation, AFL = Atrial Flutter, LAMA = Long acting muscarinic antagonist, LABA = Long acting beta2 agonist, ICS = Inhaled corticosteroids, SABA = Short acting beta2 agonist

0.5 1.0 1.5 2.0 2.5

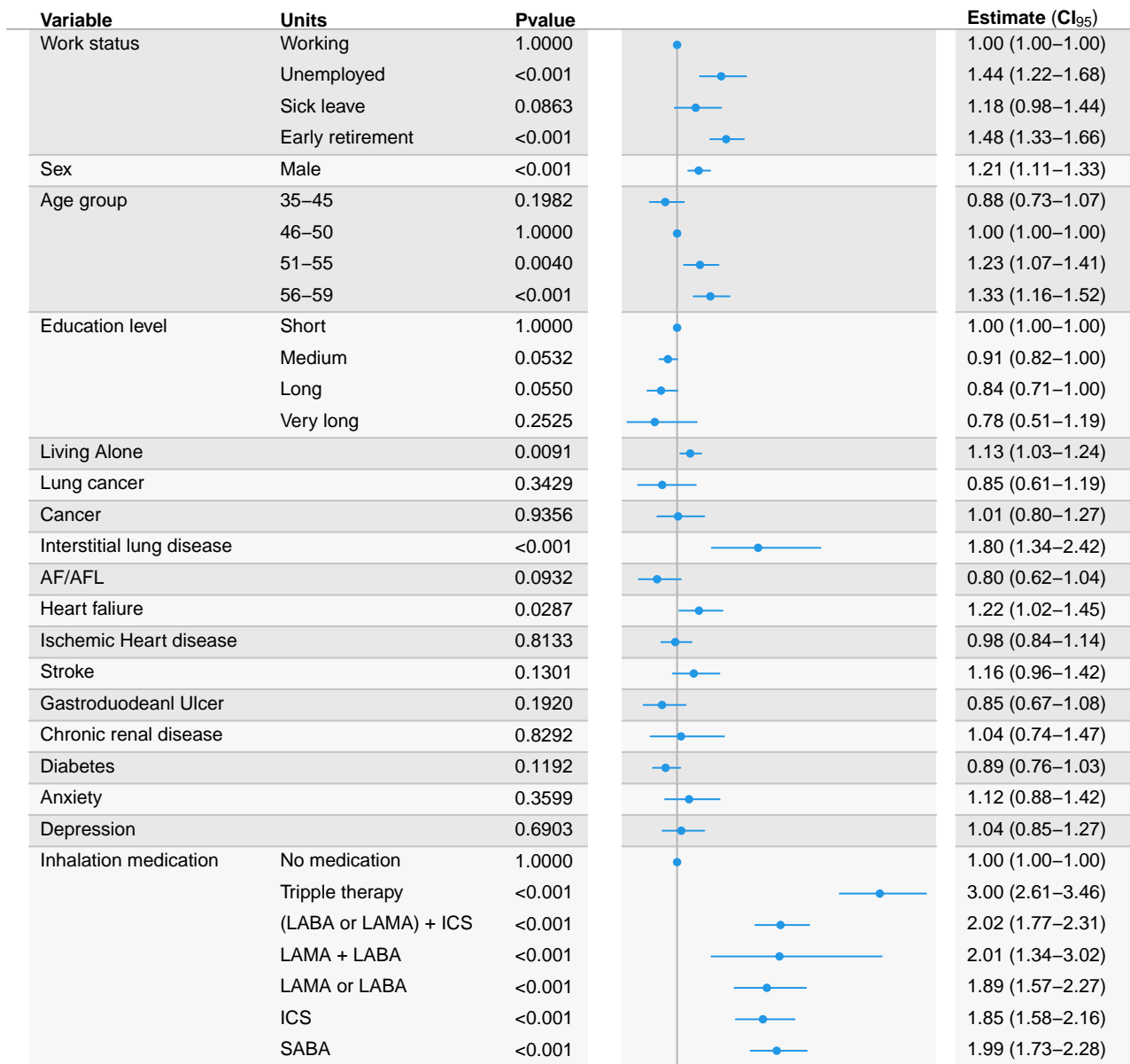


Figure S3. Multivariable logistic regression of 365-day readmission following first admission with AECOPD. All variables are included in one model. Abbreviations: AF = Atrial fibrillation, AFL = Atrial Flutter, LAMA = Long acting muscarinic antagonist, LABA = Long acting beta2 agonist, ICS = Inhaled corticosteroids, SABA = Short acting beta2 agonist

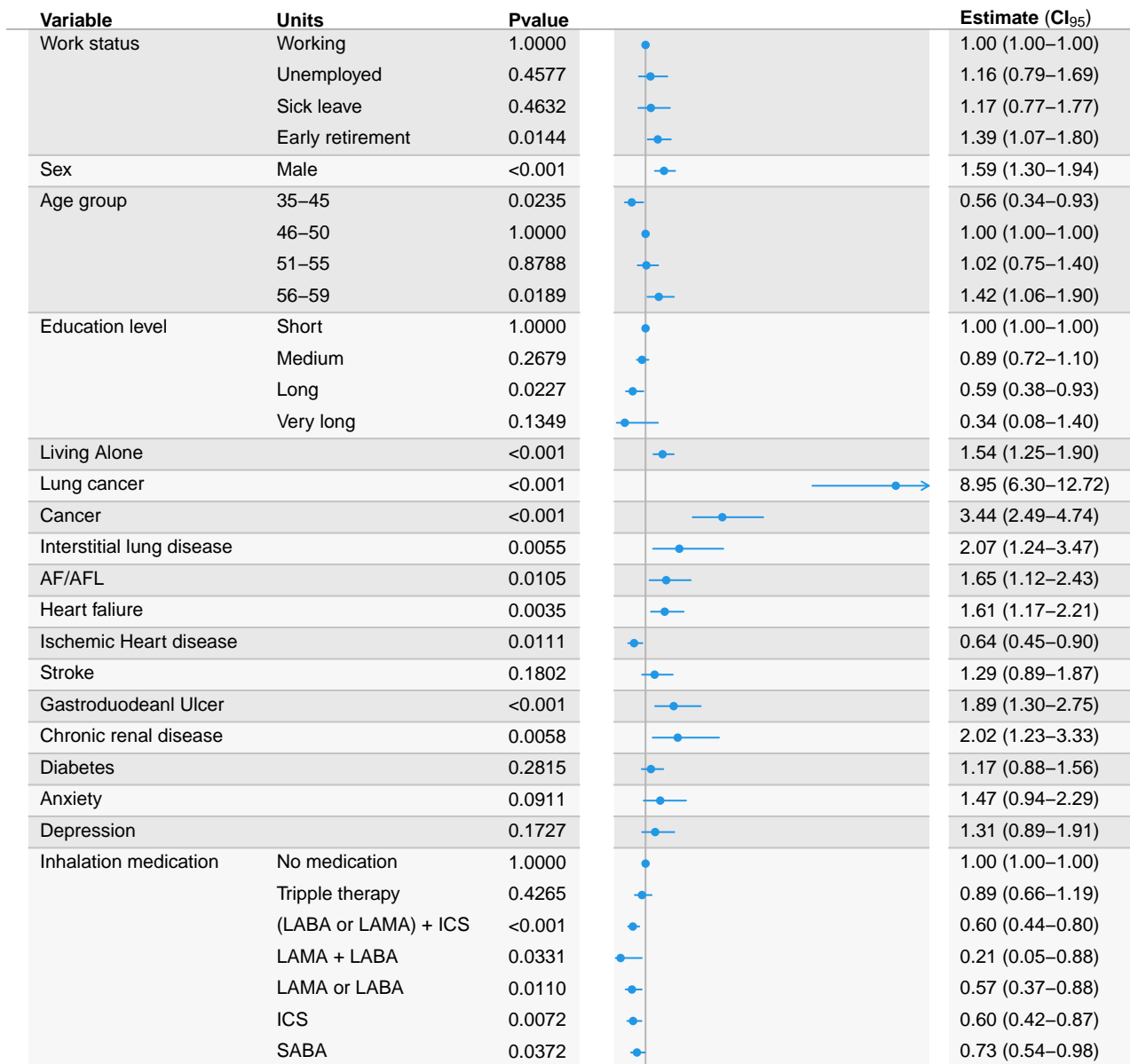


Figure S4. Multivariable logistic regression of 30-day mortality following first admission with AECOPD. All variables are included in one model. Abbreviations: AF = Atrial fibrillation, AFL = Atrial Flutter, LAMA = Long acting muscarinic antagonist, LABA = Long acting beta2 agonist, ICS = Inhaled corticosteroids, SABA = Short acting beta2 agonist

Variable	Units	Pvalue		Estimate (CI ₉₅)
Work status	Working	1.0000		1.00 (1.00–1.00)
	Unemployed	0.9870		1.00 (0.71–1.40)
	Sick leave	0.1487		1.29 (0.91–1.82)
	Early retirement	0.0059		1.37 (1.09–1.70)
Sex	Male	<0.001		1.55 (1.31–1.85)
Age group	35–45	0.0387		0.64 (0.42–0.98)
	46–50	1.0000		1.00 (1.00–1.00)
	51–55	0.7092		1.05 (0.80–1.38)
	56–59	<0.001		1.59 (1.23–2.04)
Education level	Short	1.0000		1.00 (1.00–1.00)
	Medium	0.2739		0.91 (0.76–1.08)
	Long	0.0032		0.55 (0.37–0.82)
	Very long	0.0869		0.36 (0.11–1.16)
Living Alone		<0.001		1.61 (1.35–1.93)
Lung cancer		<0.001		10.36 (7.57–14.19)
Cancer		<0.001		3.49 (2.64–4.61)
Interstitial lung disease		0.0095		1.85 (1.16–2.94)
AF/AFL		0.0085		1.57 (1.12–2.20)
Heart failiure		<0.001		1.87 (1.43–2.43)
Ischemic Heart disease		0.0190		0.71 (0.53–0.95)
Stroke		0.1792		1.25 (0.90–1.72)
Gastroduodeanl Ulcer		<0.001		1.85 (1.33–2.57)
Chronic renal disease		<0.001		2.23 (1.46–3.42)
Diabetes		0.3122		1.14 (0.89–1.46)
Anxiety		0.0569		1.45 (0.99–2.13)
Depression		0.0737		1.35 (0.97–1.86)
Inhalation medication	No medication	1.0000		1.00 (1.00–1.00)
	Tripple therapy	0.2999		0.87 (0.67–1.13)
	(LABA or LAMA) + ICS	0.0057		0.71 (0.56–0.90)
	LAMA + LABA	0.0272		0.30 (0.10–0.87)
	LAMA or LABA	0.0203		0.65 (0.45–0.94)
	ICS	0.0120		0.67 (0.50–0.92)
SABA		0.0370		0.76 (0.59–0.98)

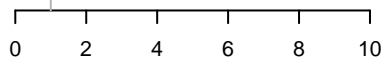


Figure S5. Multivariable logistic regression of 90-day mortality following first admission with AECOPD. All variables are included in one model. Abbreviations: AF = Atrial fibrillation, AFL = Atrial Flutter, LAMA = Long acting muscarinic antagonist, LABA = Long acting beta2 agonist, ICS = Inhaled corticosteroids, SABA = Short acting beta2 agonist

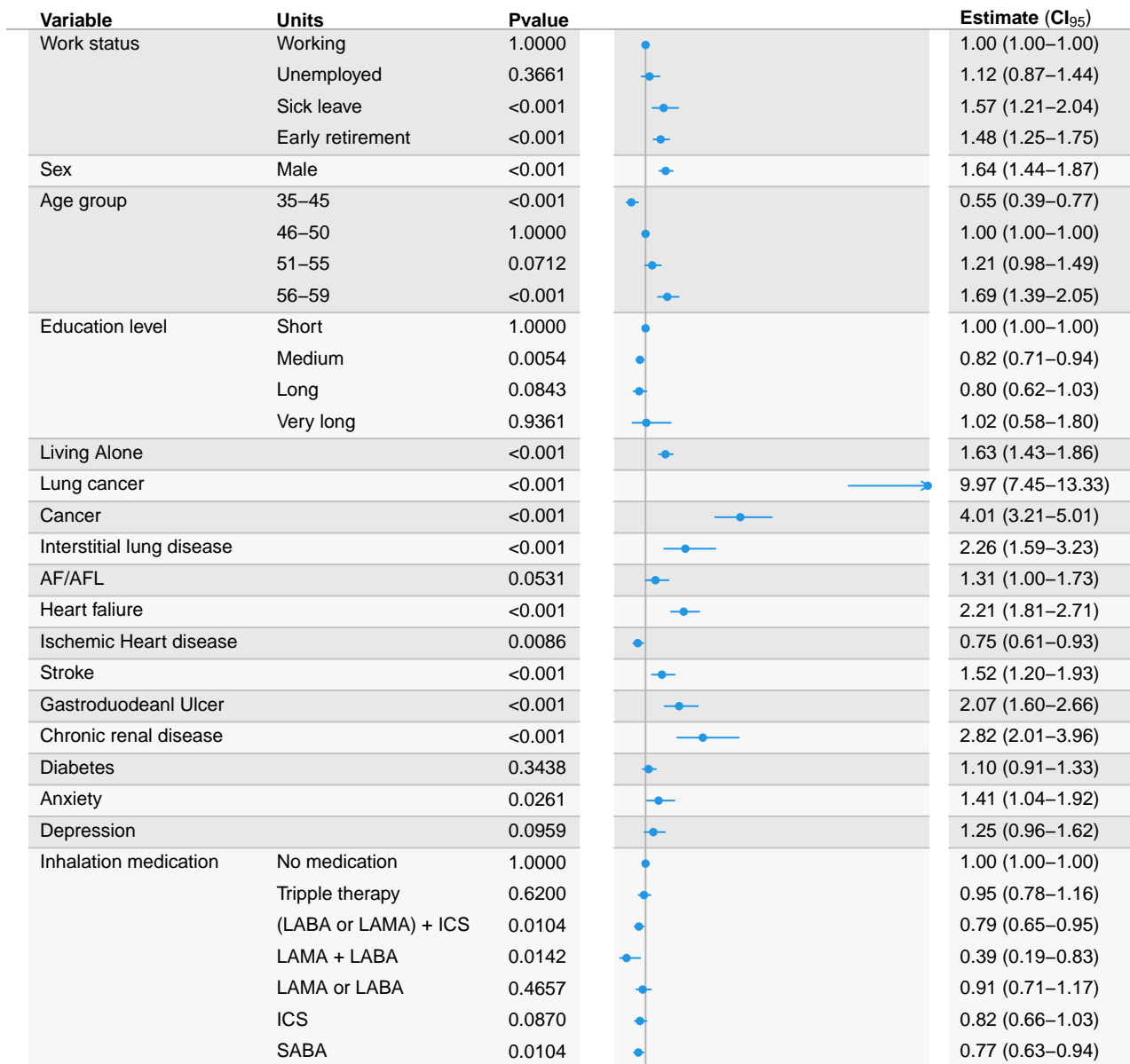


Figure S6. Multivariable logistic regression of 365-day mortality following first admission with AECOPD. All variables are included in one model. Abbreviations: AF = Atrial fibrillation, AFL = Atrial Flutter, LAMA = Long acting muscarinic antagonist, LABA = Long acting beta2 agonist, ICS = Inhaled corticosteroids, SABA = Short acting beta2 agonist