

Supplementary Material 1. English version of the questionnaire

Center Number: _____

Patient Number: _____

Center Name: _____

Inclusion Criteria (If any item is not met, the patient cannot be included)

1. Age 18 years or older

Yes No

2. Patients whose primary reason for hospitalization is confirmed or suspected acute exacerbation of chronic obstructive pulmonary disease (COPD)

Yes No

Exclusion Criteria (If any item is met, the patient cannot be included)

1. Refusal to sign the informed consent form

Yes No

2. Participants currently involved in other drug clinical trials or interventional studies

Yes No

Part I: Demographic characteristics and smoking history

Basic Information

Gender: _____

Date of Birth: _____

Education Level: Primary School or Below Junior High School Senior High School / Vocational School University / Junior College

Smoking History

(1) Do you smoke? Current smoker (total cigarettes smoked exceeds 100) [Continue to (2)]

Former smoker (total cigarettes smoked exceeded 100, and quit smoking for more than six months) [Continue to (2)] Never smoked [Skip to Question 8]

(2) Age when you started smoking: _____ years old

If you have quit smoking, age when you quit smoking: _____ years old, reason for quitting smoking:

Quit smoking due to illness

Quit smoking after being persuaded by others

Quit smoking on your own initiative

Other

Part II: Medical history related to COPD

Before this hospitalization, have you been diagnosed with chronic obstructive pulmonary disease (COPD) by a doctor?

Not diagnosed

Previously diagnosed with COPD, the diagnosis time was _____
whether the diagnosis of COPD was made after a pulmonary function test.
Yes No

History of acute exacerbation:

In the past 12 months, how many times have you had acute exacerbations of COPD?

How many times have you been hospitalized due to acute exacerbations of COPD?

How many times have you visited the emergency department due to acute exacerbations of COPD?

Treatment history:

(1) In the year before this episode of illness, have you received the following COPD pharmacological treatments?

Regular use (for more than 3 months) of long-acting bronchodilators:

Yes No

Regular use (for more than 3 months) of inhaled corticosteroids:

Yes No

(2) In the year before this episode of illness, have you received the following COPD non-pharmacological treatments?

Pulmonary rehabilitation therapy (e.g., pursed-lip breathing, diaphragmatic breathing, physical exercise, nutritional support, psychological therapy):

Yes No

Home oxygen therapy: Yes, for _____ hours per day No

Non-invasive ventilation: Yes No

Part III: Self-reported vaccination status against influenza and pneumonia

Have you used the following treatments to prevent acute exacerbations of COPD?

Have you ever received the influenza vaccine or pneumonia vaccine to prevent acute exacerbations of COPD?

Yes No

Received the influenza vaccine within the past year

Yes No

Received the pneumonia vaccine within the past 5 years

Yes No

Have you received the COVID-19 vaccine?

Yes No

Part IV: Assessment scales for respiratory symptoms and functional status

Global Initiative for Chronic Obstructive Lung Disease (GOLD)

Pulmonary Function Tests (During Hospitalization)

Item	Predicted Value	Pre-Bronchodilator Measured Value	Post-Bronchodilator Measured Value
FVC	(L)	(L)	(L)
FEV1	(L)	(L)	(L)
FEV1/FVC	(%)	(%)	(%)

COPD assessment test (CAT)

I never cough.	0	1	2	3	4	5	I always cough.
I have no phlegm at all.	0	1	2	3	4	5	I have a lot of phlegm.
I don't feel any chest tightness.	0	1	2	3	4	5	I have a very severe feeling of chest tightness.
When I go up a hill or a flight of stairs, I don't feel out of breath.	0	1	2	3	4	5	When I go up a hill or a flight of stairs, I feel very out of breath.
My activities at home are not affected by COPD.	0	1	2	3	4	5	My activities at home are greatly affected by COPD.
Despite my lung disease, I am confident about going out.	0	1	2	3	4	5	I have no confidence at all about going out because of my lung disease.
I sleep well.	0	1	2	3	4	5	I sleep poorly because of my lung disease.
I am full of energy.	0	1	2	3	4	5	I have no energy at all.

Modified Medical Research Council (mMRC) Dyspnea Scale

- 0 = No significant breathlessness (except with strenuous exercise)
- 1 = Short of breath when walking quickly or going up a slight hill
- 2 = Walks more slowly than contemporaries because of breathlessness or has to stop for breath when walking at own pace on level ground
- 3 = Has to stop for breath after walking about 100 meters or after a few minutes on level ground
- 4 = Too breathless to leave the house or breathless when dressing

Part V: Documentation of complications and comorbid conditions

Complications/Comorbidities during hospitalization: (Multiple choices)

- Respiratory failure
- Cor pulmonale
- Pulmonary Infection
- Asthma
- Bronchiectasis
- Pulmonary hypertension
- Pulmonary thromboembolism
- Lung cancer

- Hypertension
- Diabetes mellitus
- Coronary heart disease
- Acute heart failure
- Chronic heart failure
- Cerebrovascular disease
- Gastroesophageal reflux disease
- Other _____

Part VI: Reasons for not receiving the influenza or pneumonia vaccines

Reasons for not receiving the influenza or pneumonia vaccines (multiple choices)

- I am unaware that I need to get vaccinated (Lack of perceived need)
- I am very healthy and do not need to be vaccinated (Health status overconfidence)
- I believe the diseases are not harmful enough, so there is no need (Disease severity underestimation)
- I am concerned about the potential adverse reactions to the vaccine (Vaccine safety concerns)
- I think the vaccines are ineffective or have limited effectiveness (Vaccine effectiveness doubt)
- I consider the vaccine prices too expensive (Financial barriers)
- The vaccination sites are inconveniently located (Geographical inaccessibility)
- I do not know where to get vaccinated (Lack of vaccination site awareness)
- Other _____