Appendix 1. The modified Medical Research Council dyspnea scale

Grade	Descriptor
0	I only get breathless with strenuous exercise
1	I get short of breath when hurrying on level ground or walking up a slight hill
2	On level ground, I walk slower than people of my age because of breathlessness, or I have to stop for breath when walking at my own pace on the level
3	I stop for breath after walking about 100 metres or after a few minutes on level ground
4	I am too breathless to leave the house or I am breathless when dressing/undressing

Appendix 2. Leicester Cough Questionnaire (LCQ)

INSTRUCTIONS: These questions are designed to assess the impact of your cough on various aspects of your life. Read each question carefully and answer by checking the response that best applies to you in the past **TWO WEEKS**

		All the time	Most of the time	A good bit of the time	Some of the time	A little bit of the time	Hardly any of the time	None of the time
1	Have you had chest or stomach pains as a result of your cough?	1	2	3	4	5	6	7
2	Have you been bothered by phlegm production when you cough?	1	2	3	4	5	6	7
3	Have you been tired because of your cough?	1	2	3	4	5	6	7
4	Have you felt in control of your cough?	7	6	5	4	3	2	1
5	Have you felt embarrassed by your coughing?	1	2	3	4	5	6	7
6	My cough has made me feel anxious	1	2	3	4	5	6	7
7	My cough has interfered with my job, or other daily tasks	1	2	3	4	5	6	7
8	I felt that my cough interfered with the overall enjoyment of my life	1	2	3	4	5	6	7
9	Exposure to paint or fumes has made me cough	1	2	3	4	5	6	7
10	Has your cough disturbed your sleep?	1	2	3	4	5	6	7
11	How many times a day have you had coughing bouts?	1	2	3	4	5	6	7
12	My cough has made me feel frustrated	1	2	3	4	5	6	7

13	My cough has made me feel fed up	1	2	3	4	5	6	7
14	Have you suffered from a hoarse voice as a result of your cough?	1	2	3	4	5	6	7
15	Have you had a lot of energy?	7	6	5	4	3	2	1
16	Have you worried that your cough may indicate a serious illness?	1	2	3	4	5	6	7
17	Have you been concerned that other people think something is wrong with you, because of your cough?	1	2	3	4	5	6	7
18	My cough has interrupted conversations or telephone calls	1	2	3	4	5	6	7
19	I feel that my cough has annoyed my partner, family or friends.	1	2	3	4	5	6	7

Structure

The **LCQ** comprises **19 items** divided into three domains:

- **Physical (8 items)**: Covers symptoms like chest/stomach pain, bothersome phlegm, tiredness, and sleep disturbances.
- **Psychological (7 items)**: Evaluates emotional burdens, including embarrassment, anxiety, and concerns about serious illness.
- **Social (4 items)**: Assesses disruptions in daily work, conversations, and relationships due to chronic cough.

Each item uses a 7-point Likert scale, ensuring nuanced data collection. Moreover, the questionnaire takes approximately 5–10 minutes to complete, enhancing its practicality in clinical settings.

Scoring Method

The **LCQ** asks patients 19 questions analyzing their cough **over the previous two weeks** and employs a **7-point Likert scale** (1 = all the time, 7 = never) for each item. Notably, items 4 and 15 require reverse scoring (8 − original score). To calculate scores:

- **Domain Scores**: Sum the scores for items in each domain (Physical, Psychological, Social) and divide by the number of items (8, 7, and 4, respectively). Each domain score ranges from 1 to 7.
- **Total Score (LCQ-TS)**: Sum the three domain scores, yielding a range of 3 (worst quality of life) to 21 (best quality of life).

Interpretation:

- **Mild**: 17.54–21.00
- **Moderate**: 12.29–17.53
- **Severe**: 3.00–12.28

A minimal clinically important difference (MID) of 1.3 points indicates meaningful improvement. Consequently, this scoring system allows clinicians to track treatment progress effectively.

Appendix 2.普通话版莱斯特咳嗽问卷

1 近两周来，咳嗽会让您胸痛或肚子痛吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

2 近两周来，您会因咳嗽有痰而烦恼吗？

①每次都会　②多数时间会　③不时会　④有时会　⑤偶尔会　⑥极少会　⑦从来不会

3 近两周来，咳嗽会让您感到疲倦吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

4 近两周来，您觉得能控制咳嗽吗？

①一点也不能　②几乎不能　③很少能　④有时能　⑤常常能　⑥多数时间能　⑦一直都能

5 近两周来，咳嗽会让您觉得尴尬吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

6 近两周来，咳嗽会让您焦虑不安吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

7 近两周来，咳嗽会影响您的工作或其他日常事务吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

8 近两周来，咳嗽会影响您的整个娱乐生活吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

9 近两周来，接触油漆油烟会让您咳嗽吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

10 近两周来，咳嗽会影响您的睡眠吗？

①一直都会　②大多数时间会　③常常会　④有时会　⑤很少会　⑥几乎不会

⑦一点也不会

11 近两周来，您每天阵发性咳嗽发作多吗？

①持续有　②次数多　③时时有　④有一些　⑤偶尔有　⑥极少有　⑦一点也没有

12 近两周来，您会因咳嗽而情绪低落吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

13 近两周来，咳嗽会让您厌烦吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

14 近两周来，咳嗽会让您声音嘶哑吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

15 近两周来，您会觉得精力充沛吗？

①一点也不会　②几乎不会　③很少会　④有时会　⑤常常会　⑥多数时间会　⑦一直都会

16 近两周来，咳嗽会让您担心有可能得了重病吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

17 近两周来，咳嗽会让您担心别人觉得您身体不对劲吗？

①一直都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

18 近两周来，您会因咳嗽中断谈话或接听电话吗？

①每次都会　②大多数时间会　③时常会　④有时会　⑤很少会　⑥几乎不会　⑦一点也不会

19 近两周来，您会觉得咳嗽惹恼了同伴、家人或朋友？

①每次都会　②多数时间会　③不时会　④有时会　⑤偶尔会　⑥极少会　⑦从来不会

LCQ-MC 评分方法

（研究者填）

1.区域（问题）	评定分数
①生理：包括问题 1，2，3，9，10，11，14，15	生理=（　）÷8=
②心理：包括问题 4，5，6，12，13，16，17	心理=（　）÷7=
③社会：包括问题 7，8，18，19	社会=（　）÷4=
3.总分=三区域得分之和	总分=

Appendix 3. STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No	Recommendation	
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	Abstract
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	Abstract
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	Introduction
Objectives	3	State specific objectives, including any prespecified hypotheses	Introduction
Methods			
Study design	4	Present key elements of study design early in the paper	Methods – Study population
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Methods – Study population; Data collection and management
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants	Methods – Study population
		(*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed *Case-control study*—For matched studies, give matching criteria and the number of controls per case	Not applicable
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	Methods – Definition of recovery endpoint; Statistical analysis
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Methods – Assessment measurements; Data collection and management
Bias	9	Describe any efforts to address potential sources of bias	Discussion – Limitations
Study size	10	Explain how the study size was arrived at	Not applicable

Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	Methods – Statistical analysis
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	Methods – Statistical analysis
		(*b*) Describe any methods used to examine subgroups and interactions	Not applicable
		(*c*) Explain how missing data were addressed	Methods – Statistical analysis; Results
		(*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed *Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy	Results – Characteristics of patients
		(*e*) Describe any sensitivity analyses	Not applicable

Results

Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	Results – Characteristics of patients
		(b) Give reasons for non-participation at each stage	Results – Characteristics of patients
		(c) Consider use of a flow diagram	Fig1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Table 1; Table S3
		(b) Indicate number of participants with missing data for each variable of interest	Results; Discussion – Limitations
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)	Results – Longitudinal profiles and time to recovery
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time	Results
		Case-control study—Report numbers in each exposure category, or summary measures of exposure	Table S1
		Cross-sectional study—Report numbers of outcome events or summary measures	Table S2
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	Results – Risk factors for non-recovery; Table 2

		(*b*) Report category boundaries when continuous variables were categorized	Methods – Assessment measurements
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	Not applicable
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Table S3
Discussion			
Key results	18	Summarise key results with reference to study objectives	Discussion
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Discussion – Limitations
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Discussion
Generalisability	21	Discuss the generalisability (external validity) of the study results	Discussion
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Funding section

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.