



Underwriting COPD

Philippine

Society of Insurance Medicine



COPD

COPD – major cause for morbidity and mortality throughout the world, will become the 3rd leading cause of death worldwide by 2030.

Most common causes of death from COPD are respiratory failure, lung CA, CV complications, metabolic abnormalities and infections.

Note: increasing trend in mortality rates.



COPD

Underwriting COPD:

Identify risks of developing chronic irreversible airway obstruction, take into account:

Smoking history

Genetic predisposition



COPD

Medical Requirements:

1. **FME**
2. **Attending physician's statement (APS)**
3. **Pulmonary Function Test (PFT)**
4. **Chest xray**



1. UW Guidelines

Degree	FEV1	Symptoms
Mild	80-90%	SOB noticeable only with unusual exertion; < 1wk absence per yr during acute episodes.
Moderate	50-79%	SOB on mild exertion; more absences, however can still work full time.
Severe	<50%	SOB at rest/daily activities, disabled from full time work. Frequent exacerbations.



1. UW Guidelines

Additional rating for smoking history:

Stopped smoking ≥ 1 yr – 0; < 1 yr – Current

Current smoker:

Age	Life	CI	WPD	ADB
≤ 45	+50	+50	+25	0
> 45	+25	+25	0	0



2. UW Guidelines

	FEV1	Symptoms
Early Stage	<65%	Recurrent cough with mucopurulent expectoration
Intermediate	50-65%	SOB or dyspnea on moderate exertion.
Late Stage	40-49% 35-39%	Dyspnea at rest or with ordinary daily activities.



UW Rating (1st)

Degree	Age	Rating
Mild	≤ 45	+100 125 CI (-) T/WPD, w/ ADB
	> 45	50 75 50 /Dec w/ ADB
Moderate	≤ 45	+150 No riders
	> 45	100 No riders
Severe	≤ 45	DECLINE
	> 45	



UW Rating (1st)

Disability rating structure takes into account whether particular occupational factors may impact with a disease to produce greater risk of disability.

Occupational factors which may increase risk of disability:

- 1. Exposure to weather and temperature**
- 2. Heavy physical labor**
- 3. Exposure to dust, gas and chemicals**
- 4. Exposure to allergens**



UW Rating (2nd)

Early Stage FEV1/FVC <70%p	Smoker +25	W/known hereditary predisposition +25 to 50 Stopped smoking > 1yr – Std.
Intermediate FEV1 50-65%p	50 – 75	+100 to 150 Stopped smoking, credit 25 pts.
Late FEV1 40-49 %p	+50	+150 – 200
35-39%p	+50	+200 and up

CLASSIFICATION FOR RATING PURPOSE

Mild - No dyspnoea on exertion, pulmonary function tests slightly impaired; FEV1 $> 80\%$ of predicted value.

Moderate - Slight dyspnoea on exertion, minor clinical signs, greater impairment of pulmonary function; FEV1 between 70% and 80% of predicted value.

Severe - Moderate dyspnoea on exertion, obvious clinical signs, pulmonary function tests markedly impaired; FEV1 $< 70\%$ of predicted value.

UNDERWRITING REQUIREMENTS

APS

ME

PFT

RATING	LIFE	ADB	TPD/WP	DD
Primary or Essential Emphysema				
Mild	+50/+100	1.5x	2x	+100
Moderate	+150/+200	2x/D	D	+150/D
Severe	+250/+400	D	D	D
COPD/ Chronic Bronchitis		Rate as Chronic Bronchitis		D
Other forms				CMO
Additional factors				
Smoking, current or ceased within 2 years	Use higher ratings if condition categorised as moderate or severe, or if basic premium rates do not have a smoking differential			
Cigarettes				Add +25/+50
≤ 20 per day				Add +50/+100
> 20 per day				Add +25
Pipes /Cigars				
With complications				
Asthma			Add rating to Asthma	
Cardiac enlargement 20% or more, Cor pulmonale, heart failure, cyanosis or dyspnoea at rest, markedly abnormal pulmonary function studies, FEV1 ≤ 50% of predicted value	D	D	D	D



3. UW Guidelines

1. COPD Cases that are DECLINED:

- a) FEV 1 < 35 % predicted**
- b) Heart rate over 100/min**
- c) PaO₂ < 60 mmHg; PaCO₂ > 50 mm Hg**
- d) ECG or 2D echo evidence of right ventricular hypertrophy**
- e) An episode of edematous heart failure**
- f) Pulmonary hypertension**
- g) Use of oxygen in the home**



COPD

UW Notes

2. PFTs:

- a) If there are no pulmonary function tests, rate in line with the symptoms.**
- b) If 2 levels of severity are given, always rate with the highest category.**
- c) If w/ progr. deter. in pulmo function, PP until condition has stabilized.**



COPD

UW Notes

3. CXR

a) Poor correlation b/w a radiological dx of emphysema and true destructive panacinar emphysema. CXR appearance – caused mainly by air trapping; reading of “emphysema” should not be used as a criterion of impairment in evaluating COPD.



COPD

UW Notes

b) CXR readings of “hyperluscency,” “bullous emphysema,” “hyperaeration” are only suggestive but not indicative of emphysema.

4. P.E. findings of “barrel chest” or “barrel- shaped chest” has been shown to be unrelated to functional signs of emphysema. Neither is the physical observation of “poor chest expansion” be a diagnostic evidence of an emphysematous process.



COPD

UW Notes

**JOURNAL OF INSURANCE MEDICINE 2008;
40:20-25 Paul Quartararo, MD, FACP**

- 1. The applicant with COPD can no longer be viewed as a cachectic elderly male; rather, the new image of COPD appears younger and healthier. Impt: Smoking hx**
- 2. 2 important studies: Lung Health Study and TORCH studies show the natural history of COPD and the multisystem consequences of smoking and lung injury.**



COPD

UW Notes

- 3. However, seemingly healthy insurance applicants showing a mildly abnormal pulmonary function test might just give us a false sense of security that the applicant is healthy. There is a need to determine if the proposed insured has other COMORBID conditions or undiagnosed cardiovascular disease or even cancer. Bear in mind that COPD is often underdiagnosed.**



COPD

UW Notes

- 4. Always consider the presence of comorbid impairments such as cardiovascular disease, cancers beyond the lungs, even before COPD is diagnosed.**
- 5. Perform a structure assessment of the global risk such as the BODE Index:**
 - Body Mass Index**
 - Obstruction to airflow**
 - Dyspnea**
 - Exercise capacity**



COPD BODE INDEX

There is increasing understanding – COPD patients have systemic manifestations not reflective by measurement of just the FEV1.

Grading systems that can assess both respiratory and systemic expressions of COPD have been developed to better categorize and predict outcome.

BODE Index – for staging COPD



COPD BODE INDEX

Even applicants with mild COPD have increased mortality due to premature coronary artery disease.

COPD, in its advanced stages, is not just a lung disease but has systemic manifestations best measured by the BODE Index, BMI and other non-lung parameters.



BODE Index

Parameter	0 pt	1 pt	2 pts	3 pts
BMI	>21	<21		
Obstruction (FEV1)	$\geq 65\%$	50-64%	36-49%	≤ 35
Dyspnea (MMRC)	0-1	2	3	4
Exercise capacity (6 min. walk)	>350	250-349	150-249	<149



BODE INDEX

4 yr survival rate

0 – 2 points 80%

3 – 4 67%

5 – 6 56%

7 – 10 18%

**Higher BODE Index – higher risk of death
Better predictor of COPD Life Expectancy**



COPD

UW Notes

Medical requirements:

1. FME, MUR

2. APS

3. PFTs

4. CXR

5. ECG

6. ABGs

7. 2-D echo

8. Holter monitor

9. BNP — prognostic
parameter in dx of COPD to detect
the presence & severity of PHPN

10. BODE Index



Last word about COPD Life Expectancy:

How many times have we heard stories about people who are told they only have 6 months to live, only to end up beating the odds & living for yrs beyond anyone's expectations? It is true that health care providers use tools such as the BODE Index to try & predict COPD life expectancy, but a prediction is but a reasoning of the future, and not always accurate. If a patient meets a COPD diagnosis with will and determination & they implement nec. lifestyle changes that will ultimately improve their health, then they may have the ability to alter the course, and therefore prognosis, of the disease.



Case

Last year, a 43 y/o insurance executive was solicited by an agent (UW 2M) for a 2M insurance policy to be paid for 10 yrs. He is not hypertensive, not a known diabetic. He occasionally visits the beach, the church and his garden. 3 yrs ago he was brought to the ER for difficulty of breathing, high grade fever, cough w/ brownish phlegm, where CXR showed “pneumonitis, right base.” He had a history of shortness of breath about once a month, and a 5-pack yr smoking history. PFTs then showed FEV 1 = 65%, FVC 70% of predicted value. 2-D echo showed tricuspid regurgitation, trivial. He was diagnosed to have COPD and was treated accordingly with bronchodilators and steroid for a year. Repeat PFTs this year showed FEV1 = 78%; FVC 81% and FEV1/FVC = 93%. No SOBs were noted for the last 12 mos. Currently, he is able to jog for 5 kilometers. Comorbid factors: IGT. How would you rate this client.

