

Comprehensive Clinical Evaluation of Drugs for Moderate-to-Severe Chronic Obstructive Pulmonary Disease

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Introduction

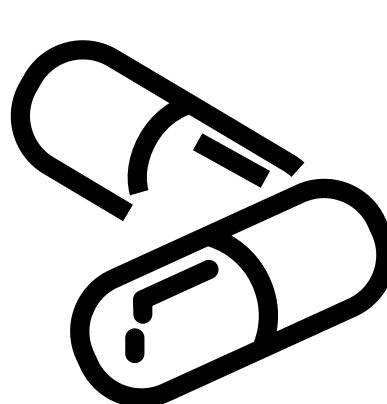
Despite existing national guidelines, challenges in a comprehensive clinical evaluation of chronic obstructive pulmonary disease (COPD) types remain:

1



The reliance on literature and expert opinion rather than real-world data

2



The narrow focus on individual drugs instead of disease-level evaluations.

3



The limited translation of research outcome into actual practice.

Objective

To establish a methodology for a comprehensive clinical evaluation of COPD disease types and to explore the decision-making mechanism in support of rational drug use.

Methodology

• Sample:

The list of medicines for evaluation is determined through extensive literature research and group discussions, which is then employed to develop a preliminary framework and indicator pool.

• Method:

Expert consultation was conducted using the Delphi method to buttress the content of the indicators; experts were selected based on their experience in fields of *clinical practice, pharmacy, and health technology assessment*.

• Analysis:

Each indicator is graded with relevant scoring rules, before being assigned with an appropriate weight through the analytic hierarchy process.^{1,2}

The evaluation focused exclusively on the moderately severe COPD population for value assessment.

Conclusion

We carried out a comprehensive clinical evaluation of drugs for moderate-to-severe stable COPD phases. This comprehensive value ranking can then be used to select medicines with higher clinical value to enhance treatment efficiency.

Results

1

Results:

- Journals selected for literature review: 109 (62 cited)
- Expert response rate: 80.95%
- Expert authority coefficient: 0.89
- Mean coefficient of variation: 0.17 (relatively high degree of convergence in experts' opinions)

Table 1. Level of consensus and coordination among expert opinions

Index	Average Score	Coefficient of Variation	Kendall's Coefficient
First-Level	4.19	0.17	0.53
Second-Level	4.35	0.16	0.28
Third-Level (stable phase)	4.38	0.17	0.34
Third-Level (acute exacerbation phase)	4.31	0.18	0.22
All	4.33	0.17	0.39

Table 2. Comprehensive Clinical Evaluation Index System for COPD Medications

First-Level Index		Second-Level Index	
	Weight		Weight
Safety	27%	Drug safety information	7%
		Government regulatory measures	3%
		Incidence and severity of adverse events	17%
Effectiveness	27%	Clinical guideline recommendations	3%
		Alleviation of clinical symptoms	15%
		Reduce the risk of acute exacerbations	9%
Economy	15%	Drug price	10%
		Cost-output analysis	5%
Innovation	6%	Clinical innovation	4%
		Industrial innovation	2%
Appropriateness	16%	Technical appropriateness of the drug	4%
		Appropriateness of drug use	12%
Accessibility	9%	Drug accessibility	3%
		Affordability	6%

REFERENCES

1. Expert Group on the Diagnosis and Treatment of Acute Exacerbation of Chronic Obstructive Pulmonary Disease. "Chinese Expert Consensus on the Diagnosis and Treatment of Acute Exacerbation of Chronic Obstructive Pulmonary Disease (2023 Revised Edition)" [J]. International Journal of Respiratory, 2023, 43(2): 132–149.
2. Chronic Obstructive Pulmonary Disease Group of the Chinese Thoracic Society, Chronic Obstructive Pulmonary Disease Working Committee of the Respiratory Physicians Branch of the Chinese Medical Doctor Association. "Guidelines for the Diagnosis and Treatment of Chronic Obstructive Pulmonary Disease (2021 Revised Edition)" [J]. Chinese Journal of Tuberculosis and Respiratory Diseases, 2021, 44(3): 170–205.