

# A Review of Available National Guidelines of Treatment of COPD in Europe

## Supplementary Information

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**Table S1. Influence of Comorbidities on COPD Treatment Decisions**

Country	Ischemic Heart Disease	Heart Failure	Atrial Fibrillation	Hypertension	Diabetes	Osteoporosis	Lung Cancer	Obstructive Sleep Apnea	Renal Disease	Other
Czech Republic	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated
England	NO	NO	NO	NO	NO	NO	NO	NO	NO	-
Finland	Careful consideration of LABA use	Careful consideration of LABA use	NO	NO	Increased risk with ICS/OCS	Increased risk with ICS/OCS	NO	NO	NO	Pneumonia: avoid prescribing ICS outside current indications for COPD
France	NO	NO	NO	NO	NO	NO	NO	NO	NO	-
Germany	NO	NO	NO	NO	NO	NO	NO	NO	NO	-
Italy	NO	NO	NO	NO	NO	NO	NO	NO	NO	-
Poland	NO	NO	NO	NO	NO	NO	NO	NO	NO	-
Portugal	NO	NO	NO	NO	NO	NO	NO	NO	NO	-
Russia	Avoid high doses of $\beta_2$ agonists	Close follow-up of patients taking high doses of $\beta_2$ agonists	Avoid high doses of $\beta_2$ agonists	NO	NO	Use systemic steroids with caution		Provide CPAP therapy		Special attention to rehabilitation in patients with anxiety or depression
Spain	NO	NO	NO	NO	NO	NO	NO	NO	NO	-
Sweden	NO	NO	NO	NO	NO	NO	NO	NO	NO	-

CPAP, continuous positive airway pressure; ICS: inhaled corticosteroids; OCS: oral corticosteroids

**Table S2. Issues and Questions**

- Issues that should be addressed:
  - The target audience(s) for guidelines should be clearly delineated.
  - Recommendations should increase suspicion of COPD among primary care physicians who are usually the first to encounter at-risk patients.
  - Assessment of disease severity and establishment of prognosis should be based on multiple factors, including exacerbation history, symptoms (including activity limitation), and pulmonary function.
  - Delineation of current disease activity (stable vs. unstable disease).
  - Measures used for patient stratification must be sensitive to treatments.
  - Better guidance is needed for stepping up or down patient treatment intensity.
  - Definition of disease progression.
  - SABAs and SAMAs should not be employed as regular treatment for symptomatic individuals with COPD; long-acting bronchodilators are needed in such patients.
  - Both potential risks and benefits should guide selection of treatments.
  - Guidelines should be updated regularly to keep pace with research.
- Question that require further research:
  - There are distinct constellations of patient characteristics that may be useful for establishment of prognosis and guiding treatment selection, but it is not clear whether they should be considered as permanent phenotypes, or how they should guide treatment longitudinally (step up/down).
  - More information is needed about the long-term efficacy and safety of LABA + LAMA combinations vs. single agents and it is most important to understand their efficacy on symptoms and exacerbations.
  - Identification of responders to ICS and patients that can safely discontinue ICS.
  - More data on the role of other pharmacologic treatments, i.e. mucolytics, macrolides in frequent exacerbators.