

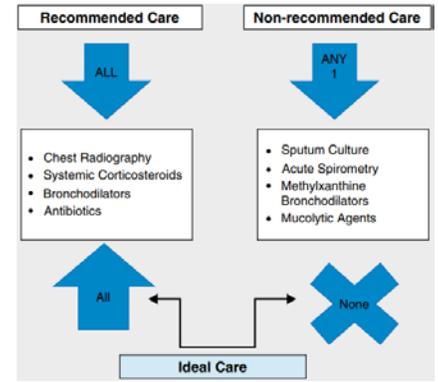
# Chronic Obstructive Pulmonary Disease (COPD)

## Practice Gap

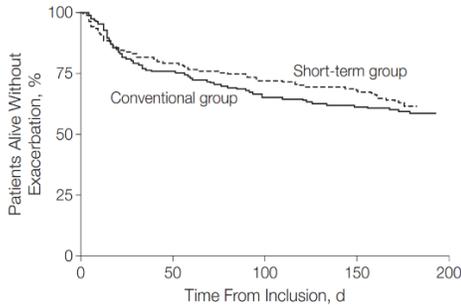
**Context:** COPD is among the most common reasons for admission and readmission. Many common practices are not evidence-based.

**Current:** Evidence shows a substantial practice gap between actual and optimal care. Progress toward ideal care is slow despite financial penalties for substandard care of COPD patients.<sup>1</sup>

**Cutting Edge:** Focus on high-yield practices that are firmly rooted in solid evidence and avoid low-value practices.



## Systemic Corticosteroids



**Context:** Steroids reduce airway inflammation and are useful adjuncts to alleviate acute airway obstruction during exacerbations.

**Current:** Steroids are often given intravenously, at high doses, and for extended durations. Extending the duration of steroids does not improve survival or readmission.<sup>2</sup>

**Cutting Edge:** Prednisone 40mg daily x5 days is as effective as any other steroid strategy and is safer with fewer adverse events than parenteral, higher-dose, or more extended regimens.

## Inhaled Corticosteroids (ICS)

**Context:** ICS are substantially beneficial in certain patients, but optimal patient selection has been controversial and difficult to define because of inconsistent or conflicting study results.

**Current:** Use of ICS should not be used as monotherapy. They are not effective for everyone, and may place patients at increased risk for pneumonia. Despite all this, ICS can be a useful adjunct for patients with severe disease and frequent readmissions.<sup>3</sup>

Strong support	Consider use	Avoid use
History of hospitalisation(s) for exacerbations of COPD# ≥2 moderate exacerbations of COPD per year# Blood eosinophils >300 cells-μL <sup>-1</sup> History of, or concomitant, asthma	1 moderate exacerbation of COPD per year# Blood eosinophils 100–300 cells-μL <sup>-1</sup>	Repeated pneumonia events Blood eosinophils <100 cells-μL <sup>-1</sup> History of mycobacterial infection

**Cutting Edge:** Use peripheral eosinophilia to guide initiation and maintenance of ICS s those with substantial eosinophilia are most likely to benefit and those with minimal eosinophilia are unlikely to benefit.

## Inhaled Treatments

**Current:** Different inhaled medications come in different delivery devices. Suboptimal administration technique may restrict clinical benefit. Many inhalers are also prohibitively expensive.

**Current:** Optimal use corresponds to improved outcomes, but many barriers (visual acuity, health literacy, dexterity) exist. Educational interventions can effectively train patients to use inhalers appropriately.<sup>4</sup>

**Cutting Edge:** critique patients on inhaler use during admission to increase their chance of thriving at home. Consider nebulizers to increase reliable medication delivery and (for some) improve affordability.

### References:

1. Rojas et al. Care Quality for Patients with Chronic Obstructive Pulmonary Disease in the Readmission Penalty Era. *Am J Respir Crit Care Med.* 2023;207(1):29-37. PMID: 35916652
2. Leuppi et al. Short-term vs conventional glucocorticoid therapy in acute exacerbations of chronic obstructive pulmonary disease: the REDUCE randomized clinical trial. *JAMA.* 2013;309(21):2223-2231. PMID: 23695200
3. Agusti et al. Inhaled corticosteroids in COPD: friend or foe? *Eur Respir J.* 2018;52(6):1801219. PMID: 30190269
4. Press et al. Misuse of respiratory inhalers in hospitalized patients with asthma or COPD. *J Gen Intern Med.* 2011;26(6):635-642. PMID: 21249463