BlueCross BlueShield of Nebraska
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BluePartners
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Care Guide *for* COPD

These guidelines are intended as an educational reference and do not supercede the clinical judgment of the treating physician with respect to appropriate and necessary care for a particular patient. The clinical references from which these guidelines are taken are listed at the end of this document.

ASSESSMENT	INDICATION	MEASUREMENT/VALUE	INTERVENTION	FOLLOW-UP
Smoking Status[1,6]	All COPD patients	■ Ask all patients if they smoke ■ If yes, then smoking cessation should be addressed ■ Document - Pack/year history - Stage of readiness to quit ■ Ask patients about exposure to secondhand smoke	Follow the **Five A's** 1. **Ask** 2. **Advise** - Strongly urge all tobacco users to quit. Educate patient regarding available nicotine replacement therapies and other pharmacologic therapies.* 3. **Assess** - Willingness to quit. - Social support during treatment. - Social support after treatment. 4. **Assist** - Devise quit plan, prescribe nicotine replacement therapies* as indicated and provide supplementary educational materials. 5. **Arrange** - Schedule follow-up contact during the first week of the quit date. Refer to formal smoking cessation program as indicated. Educate on effects of secondary smoke exposure.	Each Visit
Patient Evaluation[2,11] Symptom assessment ■ FEV_1 and FVC pre and post bronchodilator ■ Complete PFTs including lung volume and diffusion capacity test for patients with dyspnea level disproportionate to stage of disease	■ Confirm diagnosis and stage of disease ■ Monitor for development of complications and need for therapy adjustment ■ Identify reversible component of airflow limitation ■ Document steroid responsiveness ■ Determine appropriateness of steroid therapy	Stage 0: At Risk ■ Chronic symptoms ■ Exposure to risk factors ■ Normal spirometry $FEV_1/FVC \geq 70\%$ and $FEV_1 \geq 80\%$ predicted Stage **I**: Mild ■ $FEV_1/FVC < 70\%$ ■ $FEV_1 \geq 80\%$ predicted ■ With or without symptoms (cough, sputum production) Stage **II**: Moderate ■ $FEV_1/FVC < 70\%$ ■ $50\% \leq FEV_1 < 80\%$ predicted ■ With or without symptoms (cough, sputum production) Stage **III**: Severe ■ $FEV_1/FVC < 70\%$ ■ $30\% \leq FEV_1 < 50\%$ predicted ■ With or without symptoms (cough, sputum production) Stage **IV**: Very Severe ■ $FEV_1/FVC < 70\%$ ■ $FEV_1 < 30\%$ predicted ■ Presence of chronic respiratory failure or right heart failure	■ Avoidance of risk factors ■ Influenza vaccinations Add short-acting bronchodilator as needed ■ Add regular treatment with one or more long-acting bronchodilators ■ Add pulmonary rehabilitation Add inhaled glucocorticosteroids if repeated exacerbations ■ Add long-term oxygen if chronic respiratory failure ■ Consider surgical treatments	Spirometry to monitor disease progression (to be clinically relevant, the intervals between measurements should be at least 12 months)
Complete Exacerbation Plan[9]	All COPD patients	Document that patient has received exacerbation action plan and demonstrates understanding of this plan	■ Define warning signs and symptoms ■ Teach appropriate self-care actions and contacts when these signs and symptoms are experienced	Each visit or as indicated
Influenza Vaccination[5]	All COPD patients unless allergic to the vaccine or a component of the vaccine. Caution is also warranted for those patients allergic to eggs.	Document last immunization	Administer and document each year	Annually
Pneumococcal Vaccination[5]	All COPD patients	Document last immunization	■ One dose ■ A second dose is recommended for people age 65 and older who got their first dose when they were under 65, if five or more years have passed since that dose	As indicated
Medication Review[3]	All COPD patients	Document: ■ Response to medication ■ Education ■ Side effects ■ Patient adherence to medication regimen ■ Precautions	Educate regarding indications, dosages, frequencies, administering methods and possible side effects	Each visit
Medicine Delivery Device[1, 10]	Patients receiving inhaled medications with metered-dose inhalers (MDIs), nebulizers, dry powder inhalers (DPI), spacers and holding chambers	Document education on proper technique and use of these tools	■ Demonstrate proper technique and then observe that patient technique is correct ■ Review proper cleaning and storage of delivery device ■ Consider use of nebulizer, spacer or holding chamber for those who cannot properly use an MDI	Each visit or as indicated

* Recommended pharmacotherapies for smoking cessation include: First line – Bupropion SR; Nicotine gum; Nicotine inhaler; Nicotine nasal spray; and Nicotine patch. Second line – Clonidine and Nortriptyline. Over-the-counter nicotine patches.
**For patients with very severe COPD, early attention should be incorporated into the patient care plan concerning the patient's end of life preference.

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Hypoxemia Screening[9] ■ Pulse Oximetry ■ Resting and with activity ■ Nocturnal	■ Sudden increase in shortness of breath ■ Monitoring of long-term oxygen therapy ■ Suspected obstructive sleep apnea	■ % saturation	■ If patient qualifies for oxygen therapy on exertion then prescribe oxygen therapy for exertion and possibly nocturnally since these patients often become hypoxemic during sleep	Pulse Oximetry: Annually or more often as required for monitoring
■ ABG	Perform on COPD patients with: ■ FEV_1 < 40% predicted ■ Clinical signs suggestive of respiratory failure or right heart failure (central cyanosis, ankle swelling and an increase in jugular venous pressure)	■ pH ■ pO_2 ■ pCO_2	Long-term oxygen therapy is generally introduced in *Stage IV: Very Severe COPD* for patients who have: ■ PaO_2 at or below 7.3kPa (55 mm Hg) or SaO_2 at or below 88%, with or without hypercapnia; or ■ PaO_2 between 7.3 kPa (55mm Hg) and 8.0 kPa (60 mm Hg), or SaO_2 of 89%, if there is evidence of pulmonary hypertension, peripheral edema suggesting heart failure, or polycythemia (hematocrit > 55%) (*kPa is a European notation*)	ABG: As indicated
Pulmonary Rehabilitation[1,4]	COPD patients whose severity is classified as: ■ Moderate ■ Severe ■ Very severe	■ Reduced symptoms ■ Improved quality of life ■ Increased participation in daily activities	Consider referral to a pulmonary rehabilitation program ■ The minimum length of an effective rehabilitation program is two months	Reconsider referral as clinically indicated
Patient Education[9]	All COPD patients	Improved self-management skills	■ Information and advice about reducing risk factors ■ Information about the nature of COPD ■ Instructions on use of inhalers and other treatments ■ Recognition and treatment of exacerbations ■ Strategies for minimizing dyspnea ■ Information about complications ■ Information about oxygen treatment ■ Advance directives and end-of-life decisions ■ Panic control and relaxation techniques ■ Smoking cessation ■ Prevention and control of infections	Each visit
Nutrition Assessment[1]	All patients with moderate to very severe COPD	Assess nutritional status ■ Calculate BMI values: Below 20 $Kg/(m)^2$: Underweight 21 to 25 $Kg/(m)^2$: Normal 26 to 30 $Kg/(m)^2$: Overweight Over 30 $Kg/(m)^2$: Obese ■ Consider pre-albumin	Malnutrition ■ Encourage adequate nutrition via small, frequent meals and hydration unless contraindicated by fluid limitations ■ Energy conservation techniques Obesity ■ Weight management ■ Consider medical nutritional referral in either case	Each visit
Depression Screening Opportunity[11]	Screen for symptoms of depression	■ Document that each patient has been screened for symptoms of major depression over the two weeks preceding the visit ■ Coordinate care with psychiatrist or psychotherapist if involved in your patient's treatment ■ Consider using a patient self-rating depression scale such as the Beck Depression Inventory or Zung Self-Rating Depression Scale©	■ Administer treatment and/or refer patients who meet criteria for depression to a behavioral specialist ■ Administer pharmacologic interventions as indicated	■ Screening is suggested at subsequent visits ■ Evaluate response to depression treatment with three follow-up contacts in 12 weeks and adjust meds as indicated and/or confer with appropriate treating mental health specialists
Chest X Ray[1]	■ All newly diagnosed patients. CXR not sensitive in mild stages of disease but essential to exclude other disease ■ Symptoms of exacerbation	■ Exclude alternative diagnosis ■ Exclude pneumonia	■ Treat alternative diagnosis ■ Treat underlying cause	Repeat chest X Ray as required for new indications
Complete Exercise Plan[3]	All COPD patients	Document patient's current exercise plan and recommended modifications (if any)	■ Define time and type of exercise recommended for patient ■ Stage I COPD patients are generally able to participate in exercise of choice ■ Those with Stage II through IV require more specific exercise plans targeting walking and upper extremity strengthening ■ Consider referral to Pulmonary Rehabilitation Program	Each visit
Osteoporosis Evaluation[9]	All COPD patients	Document : ■ Risk for steroid-induced osteoporosis ■ Bone Densitometry	Consider calcium, vitamin D supplements and/or antiresorptive	Reassess in six months by bone densitometry if on oral steroids
Alpha 1-antitrypsin Concentration[1]	Early severe disease (3rd or 4th decade)	Blood levels of alpha 1-antitrypsin	If positive: ■ Consider referral for protease replacement therapy ■ Consider genetic counseling referral for family members	As indicated by test results

REFERENCES:

1 American Thoracic Society, *Standards for the Diagnosis & Care of Patients with Chronic Obstructive Pulmonary Disease*, March 1995.
2 National Lung Health Education Program (NLHEP), *Strategies in Preserving Lung Health & Preventing COPD & Associated Diseases*, February 1998.
3 Veterans Health Administration, *Clinical Practice Guideline for the Management of Chronic Obstructive Pulmonary Disease*, 1999.
4 Joint ACCP/AACVPR Evidence–Based Guidelines, June 1997.
5 Centers for Disease Control & Prevention, 1998.
6 U.S. Department of Health and Human Services, Public Health Service, *Treating Tobacco Use and Dependence. A Clinical Practice Guideline*, 2000.
7 Briggs, D. D., Casaburi, R., Donohue, J. F., Minjoge, S. S., Serby, C. W., & Witek, T. J. (2000). *The Spirometric efficacy of once-daily dosing with Tiotropium in stable COPD: A 13-week multicenter trial*. Chest, 118 (5), 1294-1302.
8 Cawte, S., Green, D. J., Hubbard, R., Lewis, S. A., Smith, C. J., Tattersfield, A. E., Walsh, L. J., & Wong, C. A. (2000). *Inhaled corticosteroid use and bone-mineral density in patients with asthma*. Lancet, 355 (9213), 1399-1403.
9 NHLBI/WHO *Global Initiative for Chronic Obstructive Lung Disease* (GOLD). *Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Pulmonary Disease, 2001 (updated 2003)*. www.goldcopd.com.
10 Expert Panel Report II: *Guidelines for the Diagnosis and Management of Asthma*, National Heart, Lung, and Blood Institute, 1998.
11 U.S. Preventive Services Task Force. Guide to Clinical Preventive Services. Depression.Third Edition, 2000-2003.