calgary health region

COPD - Outpatient/Discharge Prescription and Information

Emergency

☐ PLC (943-4999) ☐ 8th & 8th (781-1200)
☐ RGH (943-3450) ☐ Family Physician #_____
☐ FMC (944-1315) ☐ Other _____

Purpose: To relay information and instruction re: patient's visit to Emergency or Primary Care. To provide guidelines and prescription for optimal medical management of COPD.

Directions for Completing
Complete each section with a (✓) in the appropriate space or provide information as available in the spaces provided. Instruct Patient to provide copy to community pharmacy, and other health providers who are part of their treatment and management team.

Please press firmly - you are making multiple copies

Prescription: Date _____ **Patient** _____

Community Pharmacist to Provide [✓ appropriate box(es)]

Mild COPD
Short Acting Bronchodilator: Give one or in combination:
☐ B2 agonist; Ventolin 100 mcg 2 inhalations QID and prn by MDI
☐ Anticholinergic; Atrovent 20 mcg 3-4 inhalations QID with spacer

OR Alone
☐ Combivent 3-4 inhalations QID and prn

Moderate COPD
NB - if Atrovent used for stabilizing - **Do not** use Spirivia for 24 hours
Long acting Bronchodilators:

One of: Long Acting B2 Agonist
☐ Formoterol (Oxeze) 6-12 mcg BID dry powder, Turbuhaler
☐ Salmeterol (Serovent) 25 mcg 2 inhalations BID by MDI **Or**
☐ Salmeterol (Serovent) 50 mcg 1 inhalation BID by Diskus

Or

Long Acting Anticholinergic
☐ Tiotropium (Spiriva) 18 mcg 1 inhalation once daily by Handihaler

Antimicrobials (if two or more of the following symptoms)

- Increased dyspnea
- Increased sputum volume
- Increased purulent sputum

Antibiotics (select most appropriate choice from below)

☐ Azithromycin 500 mg first dose, **then** 250 mg po daily x 4 days
☐ Cefuroxime axetil 250 mg po BID x 7 days
☐ Clarithromycin 500 mg po BID x 7 days
☐ Doxycycline 200 mg po first dose, **then** 100 mg po daily x 5 days
☐ Septra DS 1 po BID x 7 days

Steroids (Beneficial in all patients with exacerbation)

Prednisone 50 mg po every a.m. x 10 days then discontinue with no taper

Severe COPD

Without Frequent Exacerbations (≤ 3/year)

Long Acting Bronchodilators: Long acting B2 Agonist
In Combination:
Formoterol (Oxeze) 6-12 mcg BID dry powder, Turbuhaler
Tiotropium (Spiriva) 18 mcg - 1 inhalation once daily by Handihaler
Or
☐ Salmeterol (Serovent) 25 mcg - 2 inhalations BID by MDI
Or
☐ Salmeterol 50 mcg - 1 inhalation BID by Diskus
☐ Tiotropium (Spiriva) 18 mcg - 1 inhalation once daily by Handihaler

With Frequent Exacerbations

Long acting Bronchodilator Plus inhaled Corticosteroid (ICS)
In Combination:
☐ Symbicort (200) (is equal to Pulmicort 200 mcg + Oxeze 6 mcg) Give 2 inhalations BID by Turbuhaler
☐ Tiotropium (Spiriva) 18 mcg once daily by Handihaler
Or
☐ Advair 500 Diskus (is equal to Fluticasone 500 mcg + Salmeterol 50 mcg) Give one inhalation BID
Or
☐ Advair 250 MDI 2 inhalations BID
☐ Tiotropium (Spiriva) 18 mcg once daily by Handihaler

Recommended for Severe Stage
☐ Clavulin 500 mg po TID x 7 days
☐ Levofloxacin 500 mg po Daily x 7 days
☐ Other Fluoroquinolones _____
_____
_____
_____

Other _____
_____

Physician Name _____ Physician Signature _____

(Complete discharge info on page 2 to send with patient) *See practice points back of page 1

Clinical Practice Guidelines are developed to assist in care and treatment decisions and are to be used with clinical judgement.

* Practice Points For Exacerbation in COPD

Prognosis

- Baseline FEV_1 correlates with survival.
- **2 year Survival rates:** With a post bronchodilator
  FEV_1 20 – 29% → 65%
  FEV_1 30 – 39% → 83%
- **Mortality Rate:** Exacerbation and $pCO_2 > 50$ 6 - 12 months rate is → 33% and 43% respectively
  Mechanical Ventilation → 20 – 60 %

ABGs

- A pH of < 7.25 will most likely require BIPAP and/or ICU care. A respirologist or intensivist should be contacted immediately.
- Usually in acute respiratory acidosis the pH decreases by 0.08 for every 10mm Hg increase in pCO_2.
- Chronic respiratory acidosis the HCO_3 usually increases 3 – 4 mmol/L for every 10 mm Hg increase in pCO_2.

O_2

Goal: to correct life threatening hypoxemia without causing a fall in the pH (<7.26)

- Use smallest amount of supplemental O_2 required to achieve goal. **Aim for oxygen saturations of 87-92%.**
- Initial ABGs showing hypercapnia or acidosis give O_2 by Venturi mask or Cold Nebulizer delivers a more predictable O_2 concentration than nasal prongs.
- **ABGs should be repeated x 1 20-30 min. after any change** in the O_2 when patient is unstable, then as per physician order.
- If the inspired O_2 causes a worsening of the pH (< 7.26) and the SaO_2 remains unacceptably low then this patient requires alternate therapies (BIPAP, ICU). Consult respirologist or intensivist immediately.

Antimicrobial Therapy

- If patient has recently been on antibiotics, consider a different class of antibiotic.
- These guidelines reflect local susceptibility data and may differ from Alberta Med. Assoc. Guidelines.

Corticosteroids

Rationale: Oral corticosteroids for acute exacerbations of COPD have been shown to reduce treatment failures, decrease length of stays.

Duration: 2 week course of corticosteroids is as effective as an 8 week tapering course. Tapering schedule is not required for a 2 week course of prednisone.

Dosage: Optimal dose not determined. SCCOPE trial used high dose initial therapy (methylprednisone 125 mg IV Q6h x 72 hours). Usually exacerbations can be safely treated with Prednisone 50 mg daily x 10-14 days, d/c without taper.

Long-Term Supplemental O_2

Benefits:

- Supplemental O_2 is the **only drug shown** to confer a survival benefit. Benefit is seen in patients with a $PaO_2 <$ 55 (or < 60 in the setting of pulmonary hypertension, corpulmonale or secondary polycythemia)
- The patient must wear the **O_2 a minimum of 15 hours/day.**
- There is no survival benefit of supplemental O_2 in patients with adequate PaO_2

Sedatives

- Avoid sedatives, hypnotics and narcotics if at all possible, especially if respiratory acidosis exists.

Key References/Resources:

Aaron S.D., Vandemheen K.L., Hebert P., Dales R., Stiell I.G., Ahuja J., Dickenson G., Brison R., Rowe B.H., Dreyer J., Yetisir E., Cass D., Wells G., Outpatient Oral Prednisone after Emergency Treatment of Chronic Obstructive Pulmonary Disease, N Engl J Med 2003; 348:2618-2625, June 26, 2003

Alberta Medical Assoc., The Management of Acute Bronchitis, Dec. 2000

Alberta Medical Assoc., The Management of Acute Exacerbation of Chronic Bronchitis, Dec. 2000

Canadian Respiratory Review Panel, Guidelines for the Treatment of Chronic Obstructive Pulmonary Disease, 1998

Canadian Thoracic Society and Canadian Infectious Disease Society Guidelines for Acute Exacerbation of Chronic Bronchitis - Draft, 2003

Dr. C. Chan, Dr. J. Conly, Dr. M. Miller, Dr. K. Slayter and Dr. G. Stiver, Editors and Peer Review Panel, An Evidence-based Appraisal of the New Respiratory Fluoroquinolones in Lower Respiratory Tract Infections, University of Manitoba, Summer 2002. [Funded by Janssen - Ortho Inc. with statement against bias].

R.A. Pauwels, A.S. Buist, P.M. Calverly, C.R. Jenkins, and S.S. Hurd, Global Strategy for the Diagnosis, Management and Prevention of Chronic Obstructive Pulmonary Disease, Am J Resp Critical Care Med. Vol. 163, pp. 1256-1276, 2001

Local expert opinion and consensus between CHR Respiratory Medicine, Internal Medicine, Family Medicine, and Emergency Medicine, 2002

Division of Respiratory Medicine accepts accountability for annual review and update with change in evidence.

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Directions
To be completed and sent with patient on discharge - Instruct patient to give copy to follow up health provider.

Emergency Has Arranged Follow up with

☐ **Home Care Client (contact 943-1600)**
☐ **Transition Services**
☐ **Family Physician** _____
☐ **Specialist** _____
☐ **Community COPD Rehab Support (Phone: 943-3602 fax: 943-3601) Leave a message if after hours.**

This patient was seen for an exacerbation of COPD. The above prescriptions were provided.
☐ ABG's or ☐ O_2 saturation _____ on room air **or** _____ LPM _____
Chest X-rays: Not Done _____ Done _____
Findings _____
Other Information _____
_____
_____

Follow Up Recommendations

Pneumococcal vaccine in 6-8 weeks (0.5 ml IM/SC) if:
1. Never received **and** eligible - age > 65 **or** comorbid conditions (See Immunization Guidelines, or call 571-9190 Communicable Disease)
2. Consider Revaccination at five years for those at high risk for invasive infection (functional or anatomic asplenia or sickle cell disease, debilitating cardio respiratory disease, hepatic cirrhosis chronic renal failure or nephrotic syndrome, HIV and immuno suppression diseases) Can. Immunization Guide, 5th edition, 1998

☐ **Flu vaccine Give 0.5 ml IM/SC during (Oct. - Mar.) If not given this year**

Teaching
☐ Smoking cessation (provide "Thinking About Quitting" pamphlet)
☐ Nicotine Replacement Therapy if patient motivated and a follow up plan can be provided (Family Physician within 1 week)
☐ COPD resource material

Recommendations for the Patient

- **See your family physician if symptoms do not improve or symptoms worsen.**
- **If you are a Home Care client, contact your coordinator (943-1600)**
- **Begin your medications as soon as possible or as directed by the physician**
- **It is important to complete your medications as prescribed**

Other Referrals/Resources

_____
_____
_____
_____
_____
_____

ELIGIBILITY CRITERIA FOR INFLUENZA AND PNEUMOCOCCAL VACCINES

INFLUENZA	PNEUMOCOCCAL
1. 65 YEARS AND OVER 2. 6 MONTHS TO 64 YEARS WITH ANY OF THE FOLLOWING:	1. 65 YEARS AND OVER 2. 2 YEARS TO 64 YEARS WITH ANY OF THE FOLLOWING:
• Chronic Anemia/hemoglobinopathy • Children (6 mo. - 18 years) on long term ASA • Health Care Workers, students and volunteers in a health care facility • Household contacts with high-risk people who cannot be vaccinated • Other Target Groups: (CUPS, PCDC, DROP IN CENTER, SAFEWORKS) • Chronic Pulmonary Disorders • (Bronchopulmonary dysplasia (BPD)), Cystic Fibrosis (CF), Asthma • Cancer	• Functional or anatomic asplenia (includes sickle cell disease). When possible vaccine should be given at least 10-14 days before splenectomy • Chronic Cerebrospinal fluid leak • Chronic Liver Disease (eg. Cirrhosis) Alcoholism • Pulmonary (COPD, Emphysema), - Asthma alone is NOT idicated for vaccine

Common Indications for BOTH Influenza and Pneumococcal Vaccines Include:

- Chronic Cardiac Disorders (**NOT** Hypertension alone)
- Diabetes Mellitus and other chronic metabolic diseases
- Chronic Kidney Disease (eg., chronic renal disease)
- Immunodeficiency, Immunosuppression (due to underlying disease and/or therapy), amtimetabolites or systemic corticosteroids
- Residents of Continuing Care facilities
- **Pregnant Women ONLY IF in high risk eligible category**
- **May be given during breast feeding**

DO NOT GIVE INFLUENZA OR PNEUMOCCAL VACCINES IF:

- **Patient has had previous anaphylactic reaction to vaccine**
- **Patient has developed Guillian-Barre Syndrome (GBS) within six to eight weeks of a previous influenza vaccine**
- **Known allergy to eggs (influenza vaccine), manifested as hives, mouth and throat swelling, breathing difficulty, hypotension, shock.**

Revaccination:

"At present, routine revaccination is **not** recommended but revaccination should be considered for those of any age at highest risk of invasive infection (functional or anatomic asplenia or sickle-cell disease; debilitating cardiorespiratory disease; hepatic cirrosis; chronic renal failure or nephrotic syndrome; HIV infection; and immunosuppression related to disease therapy).

Canadian Immunization Guide (6th Edition, 2002)