

Best Practice Tools

“Best Practices for Improvement in Dyspnea”

-Teleconference Supplement-

Observed Dyspnea Assessment Protocol:

Purpose: To encourage a standardized approach to dyspnea assessment, encouraging direct observation of patient performance.

Goals:

All comprehensive assessments will include an effective assessment of patient dyspnea, including observation of the patient performing tasks necessary to determine a score for M0490.

Protocol Steps:

- 1) Throughout the comprehensive assessment visit, the clinician will observe the patient for signs of dyspnea.
- 2) To the extent possible, the clinician will encourage performance of tasks necessary to enhance patient assessment and scoring using the [Dyspnea Tasks & Substitutions List.](#)
- 3) Each time the patient becomes dyspneic, the clinician will note the activity or situation occurring with the dyspneic episode, and record on the [Observed Dyspnea Log.](#)
- 4) At the end of the assessment, the clinician will review the activities or situations which resulted in dyspnea, and utilize the [M0490 Scoring Flowchart](#) to determine an appropriate response

Dyspnea Tasks & Substitutions List:

Response	Tasks	Substitutions
(1)	walk > 20 feet climb stairs	-Marching in place x 30 secs (standing) 45 secs (sit/supine) -Sit→Stand (x 15 reps) -Arm raises (x 1 min)
(2) (moderate exertion)	Walk < 20 feet Dressing Using commode Using bedpan	-Marching in place x 15 secs (standing) 25 secs (sit/supine) -Sit→Stand (x 7 reps) -Arm raises (x 30 sec)
(3) (minimal exertion)	Eating Talking W/agitation	-Combing hair (seated) -brushing teeth (seated) -shaving (seated)
(4)	At rest	

Observed Dyspnea Log:

Walking to chair (10 ft)
Walking to bathroom (40 ft)
Putting shoes on
Getting meds from cupboard

Tool Developed by Linda Krulish, PT MHS

References for development:

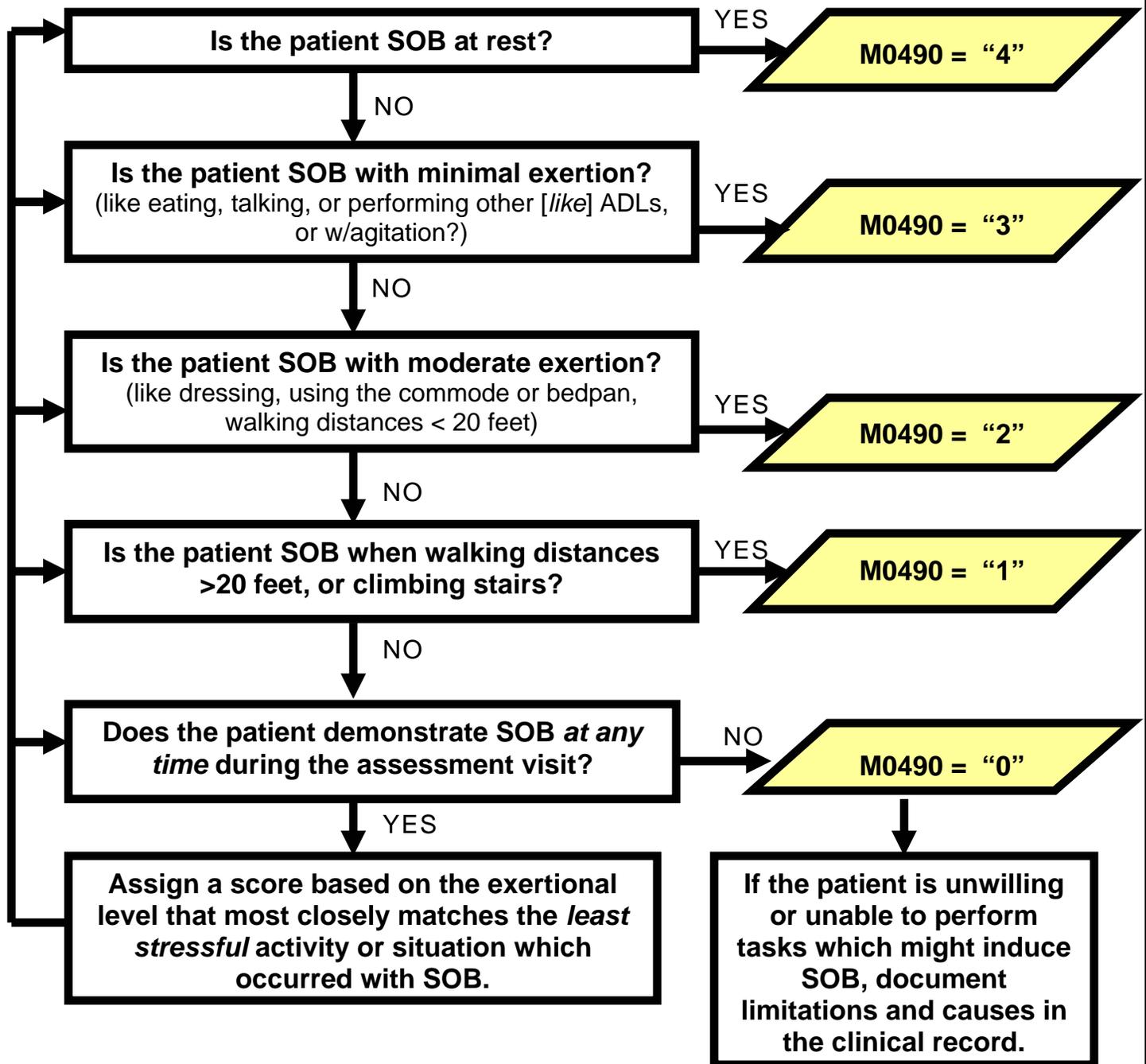
"OASIS Implementation Manual" Department of Health & Human Services. October 2003 version

"CMS OEC Conference 2003: Questions & Answers" http://www.gtso.com/download/Questions_Worksheet_Answers.pdf (last accessed 032604)

"CMS OASIS Web-based Training" www.oasistraining.org (last accessed 032604)

Observed Dyspnea Assessment Protocol
"Best Practices for Improvement in Dyspnea"
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M0490 Scoring Flowchart



Tool Developed by Linda Krulish, PT MHS

References for development:

"OASIS Implementation Manual" Department of Health & Human Services. October 2003 version

"CMS OEC Conference 2003: Questions & Answers" http://www.qtso.com/download/Questions_Worksheet_Answers.pdf (last accessed 032604)

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Clinician's Assessment Guide: Dyspnea

Purpose: To encourage a standardized approach in obtaining a patient history assessing respiratory status, and identifying pertinent signs and symptoms related to dyspnea.

History

Medical diagnoses associated with dyspnea

- Example: COPD, asthma, pneumonia, heart failure, TB, pulmonary embolism, panic attacks

Recent surgical history contributing to dyspnea

- Examples: cardiothoracic or other major surgeries

History/impact of environmental factors:

- Examples: mold, mildew, dust, temperature extremes, occupational, industrial exposures
- Current environmental factors evident in home or reported by patient

Smoking history

- No. of cigarettes/cigars per day; history of smoking cessation attempts/successes

Nutritional history

- Meal pattern, weight history (recent loss/gain), use of vitamins/nutritional supplements

Physical Assessment

Respiratory rate, rhythm, depth

- Observe for chest symmetry, use of accessory muscles, nasal flaring
- Observe for cough, sputum production
- Use of breathing techniques such as pursed lip or diaphragmatic breathing

Breath sounds

- Presence of crackles, wheezes (inspiratory, expiratory), rhonci, pleural rub

Tenor of voice

Skin color

Nail color

- Capillary refill time
- Evidence of clubbing

Oxygen saturation level with activity, at rest

- Using pulse oximetry

Zoe- thoracic fluid measurement

Current Medications

Oxygen:

- History of use, with/without activity, response to oxygen, adherence to prescribed use

Use of inhaled medications – frequency, effectiveness

All other medications, including OTC or herbal supplements

Tools Used to Monitor/Document Improvement/Decline in Dyspnea

- ✓ Peak flow meter
- ✓ Spirometry: incentive and expiratory
- ✓ **Borg Dyspnea Scale**
- ✓ **ATS Grade of Breathlessness Scale**
- ✓ **Six Minute Walk**

Tool Developed by Lisa Gorski, MS, RN, CS, CRNI

Modified Borg Scale - Rating of Perceived Dyspnea

Purpose: to encourage a standardized approach to identifying subjective perception of dyspnea (rating of perceived dyspnea)

[Scale may also be used to identify subjective perception of exertion (rating of perceived exertion),

OR subjective perception of fatigue (rating of perceived fatigue)]

Use:

The patient is asked to rate their perception of the severity level of their dyspnea.

When asking patients to rate their breathlessness, also note the following:

1. Is their voice breathy, or seem out of breath?
2. Are their sentences short or choppy?
3. Is there audible wheezing or coughing?

SCALE	SEVERITY
0	No Breathlessness at all
0.5	Very Very Slight Breathlessness (Just Noticeable)
1	Very Slight Breathlessness
2	Slight Breathlessness
3	Moderate Breathlessness
4	Somewhat Severe Breathlessness
5	Severe Breathlessness
6	
7	Very Severe Breathlessness
8	
9	Very Very Severe Breathlessness (Almost Maximum)
10	Maximum Breathlessness

*Note: the word “breathlessness” added for clarification.

When used to rate exertion, substitute “exertion” for “breathlessness”

When used to rate fatigue, substitute “fatigue” for “breathlessness”

References for tool:

Borg, GAV. “Psycho-physical bases of perceived exertion” Med Sci Sports Exerc (1982) 14:377-381.

Burdon, JGW, Juniper EF, Killian KJ, Hargrave FE, Campbell, EJ. “The Perception of Breathlessness in Asthma” American Review of Respiratory Disease (1982) 126:825-8.

Simon PM, Schwartzstein RM, Weiss JW, Lahive K, Fencel V, Teghtsoonian M, et al. “Distinguishable sensation of breathlessness induced in normal volunteers” American Review of Respiratory Disease (1989) 140:1021-7.

Six-Minute Walk Test (“6MWT”)

Purpose: to provide objective evaluation of functional exercise capacity before and after intervention, to allow objective measurement of change (expressed in increase/decrease in distance walked in a set time period)

Absolute Contraindications:

- Unstable angina during the previous month
- Myocardial infarction during the previous month

Relative Contraindications:

- Resting heart rate of greater than 120 bpm
- Systolic blood pressure of greater than 180 mm Hg
- Diastolic blood pressure of greater than 100 mm Hg

Patients with stable exertional angina should perform the test after using their antiangina medication, and rescue nitrate meds should be readily available.

Test Location:

- Test should be performed indoors, along a long, flat, straight, enclosed corridor with a hard surface
- Walking course must be 30 m in length
- Length of corridor should be marked every 3 m
- Mark turn around points with a cone to create a 60 m lap

Equipment:

- Timer or stopwatch
- Mechanical lap counter
- Cones to mark turnaround points
- A chair
- A source of Oxygen
- Sphygmomanometer
- Telephone
- Automated electronic defibrillator

Patient Preparation:

- Patient wearing comfortable clothing and supportive shoes
- Uses usual walking aid during test
- Usual medical regimen should be continued
- A light meal is acceptable before early morning or early afternoon test
- Patient should not have exercised vigorously with 2 hours of the beginning of the test

Protocol:

- 1) No “warm-up” activity should be performed.
- 2) Patient should sit at rest for at least 10 minutes prior to test.
- 3) Initial baseline portion of 6MWT Worksheet should be completed.
- 4) Pulse Oximetry is optional (if used, must be lightweight (< 2#), battery powered, and secured via strap or fanny pack – not carried).
- 5) Have the patient stand and rate their baseline dyspnea and fatigue using the Borg scale.

Six-Minute Walk Test (“6MWT”)(cont.)

6) Instructions to patient:

“The object of this test is to walk as far as possible for 6 minutes. You will walk back and forth in this hallway. Six minutes is a long time to walk, so you will be exerting yourself. You will probably get out of breath or become exhausted. You are permitted to slow down, to stop, and to rest as necessary. You may lean against the wall while resting, but resume walking as soon as you are able.

You will be walking back and forth around the cones. You should pivot briskly around the cones and continue back the other way without hesitation. Now I’m going to show you. Please watch the way I turn without hesitation.”

[Demonstrate by walking one lap yourself. Walk and pivot around a cone briskly.]

“Are you ready to do that? I am going to use this counter to keep track of the number of laps you complete. I will click it each time you turn around at this starting line. Remember that the object is to walk AS FAR AS POSSIBLE for 6 minute, but don’t run or jog. Start now, or whenever you are ready.”

- 7) Position the patient at the starting line. As soon as the patient starts to walk, start the timer. Do not walk with the patient.
- 8) Watch the patient during the test. Use an even tone of voice when providing the standard phrases of encouragement. Click the lap counter each time the patient returns to the starting line

Note: If the patient stops walking during the test and needs a rest, say “You can lean against the wall if you would like; then continue walking whenever you feel able.” Do not stop the timer. If the patient stops before the 6 minutes are up and refuses to continue (or you decide that they should not continue), wheel the chair over for the patient to sit on, discontinue the walk, and note on the worksheet the distance, the time stopped, and the reason for stopping prematurely.

Six-Minute Walk Test (“6MWT”)(cont.)

Standard Phrases of encouragement/instruction:	
After the first minute	“You are doing well. You have 5 minutes to go.”
When the timer shows 4 minutes remaining	“Keep up the good work. You have 4 minutes to go.”
When the timer shows 3 minutes remaining	“You are doing well. You are halfway done.”
When the timer shows 2 minutes remaining	“Keep up the good work. You have only 2 minutes left.”
When the timer shows 1 minutes remaining	“You are doing well. You have only 1 minute to go.”
When the time shows 15 seconds remaining	“In a moment I’m going to tell you to stop. When I do, just stop right where you are and I will come to you.”
When the timer rings	“Stop!”

- 9) Walk over to the patient. Consider taking the chair, if they look exhausted. Mark the spot where they stopped by placing a piece of tape on the floor.
- 10) Record the post-walk Borg dyspnea and fatigue levels and ask “What, if anything, kept you from walking farther?”
- 11) If using a pulse oximeter, measure SpO₂ and pulse rate then remove the sensor.
- 12) Record the number of laps on the 6MWT worksheet.
- 13) Record the additional distance walked (the number of meters in the final partial lap) and calculate total distance walked, rounding to the nearest meter, and record on the 6MWT worksheet.
- 14) Congratulate the patient on good effort and offer a drink of water.

Refer to American Thoracic Society. “ATS Statement: Guidelines for the Six-Minute Walk Test”. (2002) American Journal of Respiratory and Critical Care Medicine. 166:111-117 [for more details on test use and interpretation.](#)

6MWT WORKSHEET

Lap counter: _____

Patient name/ID#: _____

Walk # _____ Tester: _____ Date: _____

Gender: M F Age: _____ Race: _____ Height: _____ft _____in

Weight: _____lbs Blood pressure: _____/_____

Medications taken before the test (dose & time): _____

Supplemental oxygen during the test:

No Yes, flow _____ L/min, type _____

	Baseline	End of Test
Time	:	:
Heart Rate		
Dyspnea (Borg Scale)		
Fatigue (Borg Scale)		
SpO ₂	%	%

Stopped or paused before 6 minutes? No Yes, reason:

Other symptoms at end of exercise: angina dizziness hip, leg, or calf pain

Number of laps: _____ (x60 meters) + final partial lap: _____ meters =

Total distance walked in 6 minutes: _____ meters

Predicted distance: _____ meters Percent predicted: _____%

Comments/Interpretation:

Refer to American Thoracic Society. "ATS Statement: Guidelines for the Six-Minute Walk Test". (2002) American Journal of Respiratory and Critical Care Medicine. 166:111-117 for more details on test use and interpretation.

CLINICIAN GUIDE :



COPD HOME MANAGEMENT PROTOCOL : Disease Management & Exacerbation Prevention

<p>PATIENT EDUCATION</p>	<ul style="list-style-type: none"> • Basic information about COPD pathophysiology • Smoking cessation: <i>the single most effective intervention in reducing risk of development/progression of COPD</i> • Role/rationale for medications including oxygen therapy • Secretion clearance strategies • Energy conservation • Relaxation techniques • Nutrition • Breathing retraining strategies • Pulmonary Rehabilitation: <i>COPD patients at all stages benefit from pulmonary rehabilitation that includes exercise training; will improve in exercise tolerance and dyspnea/fatigue; program should be at least 2 months</i> <ul style="list-style-type: none"> ○ Suggest physical therapy referral • Disease Self-care Management <ul style="list-style-type: none"> ○ Action plan development: early symptom recognition & actions to take ○ Strategies to minimize/cope with dyspnea ○ When to seek help: home care nurse vs. emergency care ○ End of life issues
<p>EXACERBATION PREVENTION STRATEGIES</p> <p><i>Primary causes of exacerbation include tracheobronchial infection and environmental factors but in about 1/3 of cases, the cause is unknown.</i></p>	<ul style="list-style-type: none"> • Annual flu vaccine: <i>flu vaccines can reduce serious illness and death in COPD by about 50%</i> • Pneumococcal vaccine at least once • Reduce risk of infection <ul style="list-style-type: none"> ○ Wash hands frequently ○ Avoid crowds-- especially during season of increased prevalence of cold and upper respiratory infections • Reduce exposure to irritants <ul style="list-style-type: none"> ○ Monitor air quality alerts; stay indoors if air quality poor ○ Avoid extreme temperatures ○ Avoid tobacco smoke exposure ○ Eat a balanced diet, adequate sleep, ↑ activity/exercise
<p>MEDICATION TEACHING FOCUS</p>	<ul style="list-style-type: none"> • Bronchodilators: beta 2 agonists, anticholinergics, methylxanthines • Inhaled glucocorticosteroid treatment for patients with symptomatic, severe COPD • <i>Observe</i> patient use of inhalers* and re-instruct in technique as appropriate • Long term oxygen therapy (> 15 hours/day) to maintain SaO₂ of at least 90% increases survival • Other potential medications: antibiotics, psychotropics, opioids

CLINICIAN GUIDE: COPD HOME MANAGEMENT PROTOCOL: (cont.)

KEY AREAS FOR ASSESSMENT WITH EACH HOME VISIT <i>*Dyspnea is a subjective symptom that cannot be measured objectively; it is essential to acknowledge and accept the patient's self-report of dyspnea.</i>	<ul style="list-style-type: none"> ● Level of dyspnea:* <ul style="list-style-type: none"> ○ Current and usual level ○ Use a quantitative scale (e.g. Modified Borg Scale, 0-10) ● Vital signs including respiratory rate, rhythm, depth ● Breath sounds ● Ability to complete full sentences ● Chest wall movement, shape & abnormalities ● Use of accessory muscles ● Presence of cough &/or sputum ● Use of breathing techniques such as pursed lip breathing, diaphragmatic breathing ● Oxygen saturation level: activity, at rest
SIGNS/SYMPTOMS THAT MAY POTENTIALLY BE MANAGED AT HOME	<ul style="list-style-type: none"> ● Increased dyspnea: <i>main symptom of exacerbation</i> ● Increased cough ● Increased sputum production/purulent sputum ● Decreased energy ● Decreased appetite
EXPECTED HOME MEDICAL MANAGEMENT	<ul style="list-style-type: none"> ● Increased dosage and/or frequency of bronchodilator therapy ● Anticholinergic therapy may be added ● Oral glucocorticosteroids ● Antibiotics if increase in volume/purulence of sputum and/or fever
SUGGESTED HOME CARE PLAN	<ul style="list-style-type: none"> ● Home visit within 1 day after initiating medical treatment <ul style="list-style-type: none"> ○ If no improvement or symptoms worsen, notify MD and anticipate emergent care/hospitalization ○ If stabilized, home visit or telephone follow-up for 2-3 days
SIGNS/SYMPTOMS/OTHER INDICATORS SUPPORTING NEED FOR EMERGENT CARE OR HOSPITALIZATION	<ul style="list-style-type: none"> ● Marked increase in symptom intensity such as sudden increase in dyspnea at rest ● New physical signs or symptoms such as cyanosis, peripheral edema, arrhythmias ● Significant co-morbidities ● Older age ● Lack of home support ● Exacerbation signs/symptoms do not respond to initial treatment

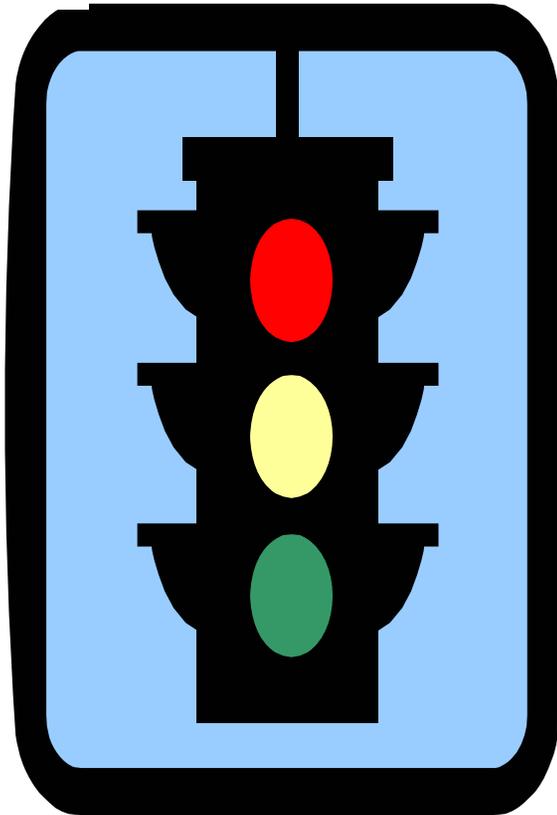
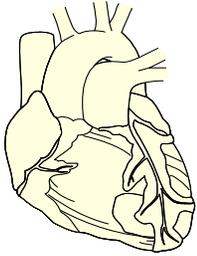
Tool Developed by Lisa Gorski, MS, APRN, BC, CRNI

References:

- Frazier, SC (2005) Implications of the GOLD report for chronic obstructive lung disease for the home care clinician. *Home Healthcare Nurse* 23 (2), 109-114.
- National Heart, Lung, and Blood Institute (NHLBI) World Health Organization (WHO) Workshop (2004) *Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease: Executive summary*. Available online: www.goldcopd.org
- Registered Nurses Association of Ontario. Nursing care of dyspnea: The 6th vital sign in individuals with chronic obstructive pulmonary disease (COPD). Available on-line: http://www.rnao.org/bestpractices/completed_guidelines/BPG_Guide_C5_COPD.asp

PATIENT ACTION PLAN FOR HEART FAILURE SIGNS & SYMPTOMS

Purpose: To promote patient identification and self-directed action for onset of symptoms related to heart failure.



Heart Failure --- Your Plan for ACTION

Use this guide to help you report changes in your symptoms to your doctor or nurse. When you report symptoms early, you are less likely to have to go to the hospital for treatment.

You are doing well when:

- ♥ Your weight is stable
- ♥ You have no trouble breathing
- ♥ You can do your normal activities
- ♥ You have no changes in your symptoms

Call your home care nurse or doctor in the next 24 hours when:

- ♥ Your weight goes up _____pounds in _____ days
- ♥ You have new swelling in your feet, ankles, hands or abdomen
- ♥ You have a dry, harsh cough that does not go away
- ♥ You use 2 or more pillows or a recliner to breathe better at night if this is different from how you usually sleep
- ♥ You feel more tired or have less energy than usual
- ♥ You have side effects from your medicines

Call your doctor RIGHT AWAY when:

- ♥ You have trouble breathing –
 - ♥ **Call 911 for severe shortness of breath**
- ♥ You feel dizzy
- ♥ You feel very anxious
- ♥ Call 911 if you have chest pain that does not go away

MD Name & Phone Number: _____

Tool Developed by: Lisa Gorski, MS, APRN, BC, CRNI
 References: *Heart Care Instructions & Information* and
How to Care for Your Heart if You Have Heart Failure
 American College of Cardiology
http://www.acc.org/gap/or/oregon_gap.htm

Patient Action Plan for HF Signs & Symptoms
 "Best Practices"

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INHALER USE: ASSESSMENT & TEACHING PROTOCOL

Purpose: to encourage a standardized and effective approach to evaluating patient inhaler use

PATIENT ASSESSMENT

FOR PATIENTS REQUIRING INHALER USE:	YES	NO
1) Can the patient define and state the purpose of his/her inhaler(s)?		
2) Is the patient taking both a bronchodilator and steroid via inhaler? (if "no" skip #3)		
3) If so, does is the patient using the bronchodilator first, to open airways and enhance effectiveness of the steroid medication?		
4) Can patient demonstrate effective use of inhaler?		
5) Could patient benefit from use of a spacer?		

PATIENT TEACHING

PATIENT IS PROVIDED INSTRUCTION IN CORRECT USE OF INHALER:	YES	NO
<ul style="list-style-type: none"> • Shake inhaler well before use 		
<ul style="list-style-type: none"> • Remove cap from inhaler (and from spacer if used) 		
<ul style="list-style-type: none"> • Put the inhaler into the spacer (if used) 		
<ul style="list-style-type: none"> • Hold upright with index finger on the top and thumb on the bottom of inhaler 		
<ul style="list-style-type: none"> • Blow all air completely out through your mouth 		
<ul style="list-style-type: none"> • (WITHOUT SPACER) <ul style="list-style-type: none"> ○ Wrap lips around mouthpiece ○ Begin a slow deep breath in and press the inhaler down with your index finger in order to give one puff of medication 		
<ul style="list-style-type: none"> • (WITH SPACER) <ul style="list-style-type: none"> ○ Bring the spacer to your mouth, put the mouthpiece between your teeth and close your lips around it ○ Press the top of the inhaler once ○ Breathe in very slowly until you have taken a full breath. (If you hear a whistle sound (some spacers have a flow signal whistle) you are breathing in too fast. Slowly breath in 		
<ul style="list-style-type: none"> • Hold your breath for about 10 seconds 		
<ul style="list-style-type: none"> • Slowly breathe out, holding your lips tight together 		
<ul style="list-style-type: none"> • Wait one minute between puffs before taking the next dose of medication, so as to allow lungs to open up as much as possible 		
Other instructions re: SPACERS		
<ul style="list-style-type: none"> • Follow regular cleaning instructions that come with your spacer 		
<ul style="list-style-type: none"> • Spray only one puff into the spacer at a time 		
<ul style="list-style-type: none"> • Replace spacer if it becomes cracked or the valve becomes damaged 		

Tool Developed by: Linda Krulish PT MHS, Ann Frantz BSN RN & Lisa Gorski RN MS CS CRNI

References for tool:

Meyers, D. Client Teaching Guides for Home Health, 2nd Ed. (1997) Aspen Publishers

Asthma Society of Canada, "How to Use Your Inhaler" www.asthma.ca/adults/treatment/spacers.php last accessed 07/12/04

NUTRITION AND COPD

Purpose: to provide standardized and comprehensive education to COPD patients and their caregivers regarding nutrition

- Eat a balanced diet, including adequate calories
- Medications can affect nutrition:



- Bronchodilators may irritate the stomach lining
 - Take with food, milk
 - For persistent symptoms, talk to doctor
- Corticosteroids can irritate the stomach, affect calcium absorption, stimulate appetite, and cause fluid retention



- Take with meals
- ↑ calcium, protein intake
- Monitor weight
- Monitor for signs of fluid retention, such as leg swelling



- Shortness of breath affects ability to eat.
A full stomach may restrict diaphragm movement

- Eat smaller meals more frequently
- ↓ intake of gas forming foods (increase distention)
- Include fiber to ↓ constipation
- Eat slowly and in a relaxed atmosphere
- Sit in a chair that allows for good posture with arm rests
- Avoid activity that requires ↑'d energy for 1 hour after eating
- A diet high in carbohydrates may ↓ exercise ability (↑'s carbon dioxide production) and ↑ dyspnea



- If mucous production is a problem, it may contribute to fatigue and ↓'d appetite

- ↑ humidity
- ↑ fluids
- Postural drainage techniques may be helpful



- If difficulty in getting to the store to buy food or difficulty in food preparation
 - Consider options (e.g. home meal delivery)
 - Energy conservation techniques



Tool Developed by: Lisa Gorski, RN, MS, CS, CRNI

Energy Conservation Strategies:

Purpose: To provide techniques to maximize patient function while minimizing limiting dyspnea and/or fatigue.

Goals:

Patient whose ADLs are limited by dyspnea will be provided energy conservation instruction to improve comfort and maximize functional status.

STRATEGIES:

Ambulation:

- Walk at a slow, comfortable pace
- Have chairs placed throughout home to allow rest stops
- Use a rolling cart to transport items, instead of carrying
- Consider using a walking aid (i.e. wheeled walker)

Bathing:

- Use a bath stool or bench during bathing
- Use a handheld shower head, and adaptive equipment like long-handled sponges or brushes
- Consider sponge bathing
- Use a terrycloth robe to help dry off after bathing

Dressing:

- Use slip on shoes, shoes with elastic laces
- Use dressing aids (sock aid, shoe horn, dressing stick, reacher, etc.)
- Put underwear inside pants or skirt, and pull them on together.
- Dress seated instead of standing
- Avoid clothes that are tight, or have many buttons, etc.

Grooming:

- Consider performing grooming tasks seated
- Select low-maintenance hair styles
- Let hair air dry, or use hair dryer cap instead of a blow dryer

Toileting:

- Avoid waiting to toilet, which might cause rushing and anxiety
- Consider use of bedside commode

General:

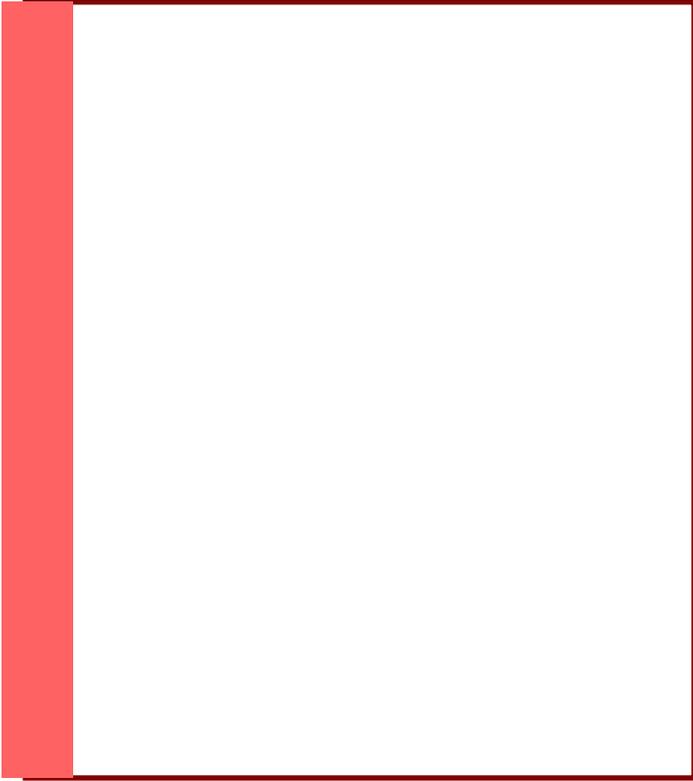
- Plan Ahead & Get Organized
 - So you can function in at a slow and comfortable pace
 - Organize your daily routines, alternating easy and more demanding activities
 - Organize "work centers" so all necessary equipment is readily available
- Simplify tasks as much as possible (i.e. prepare light meals)
- Consider eliminating unnecessary tasks (especially those that stress you out!)
- Prepare for activities by resting and performing breathing exercises
- When possible:
 - Complete tasks using larger muscle groups (i.e., legs vs. arms)
 - Use both hands to complete tasks (i.e., lifting or pushing)
- Keep room temperature comfortable
- Recognize when you need help, and ask.

Tool Developed by Linda Krulish, PT MHS

References for development:

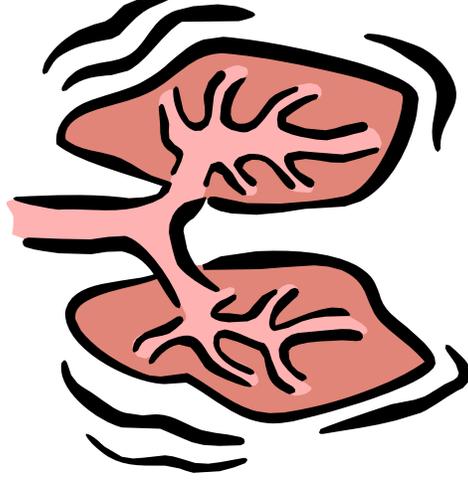
Packer, TL; Brink, N & Sauriol, A. "Managing Fatigue. A Six-Week Course for Energy Conservation" (1995) Therapy Skill Builders The Arthritis Society Website. www.arthritis.ca (last accessed 032604)

Energy Conservation Strategies
"Best Practices for Improvement in Dyspnea"
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Pulmonary Rehabilitation

– Patient Self-Care Workbook



Tool Developed by:
Lisa Gorski, MS, APRN, BC, CRNI & Linda H. Krulish, PT MHS COS-C
OASIS Answers, Inc.

Content Sources:
Pulmonary Rehabilitation
E-medicine. Available online: <http://www.emedicine.com/pmr/topic181.htm>
AARC Clinical Practice Guideline:
Pulmonary Rehabilitation
National Guideline Clearinghouse.
http://www.guidelines.gov/summary/summary.aspx?doc_id=3211&nbr=2437&string=pulmonary+AND+rehabilitation
What You Can Do About a Lung Disease Called COPD
Global Initiative for Chronic Ostructive Lung Disease.
<http://www.goldcopd.com>

What is pulmonary rehabilitation?

- Learning about your lung disease and how to manage your care
- Using breathing techniques to decrease shortness of breath
- Exercise

What are the goals of pulmonary rehabilitation?

- To reduce your symptoms
- To help you breathe more easily
- To improve your ability to do physical and social activities
- To help you learn how to do activities more easily
- To improve the quality of your life

When should I think about being in a pulmonary rehabilitation program?

- If you have chronic lung disease such as COPD (chronic obstructive pulmonary disease)
- If you have trouble doing daily activities or can't exercise because of your shortness of breath

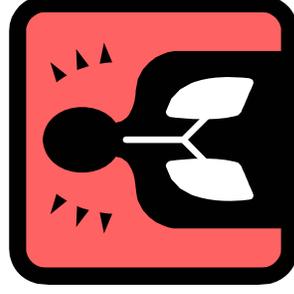
For More Information:

Global Initiative for Chronic Obstructive Lung Disease
www.goldcopd.org

American Lung Association
www.lungusa.org
1-800-LUNGUSA

You Can Quit Smoking – Consumer Guide
www.ahrq.gov/consumer

Local Resources:



Preventing COPD Symptoms from getting worse:

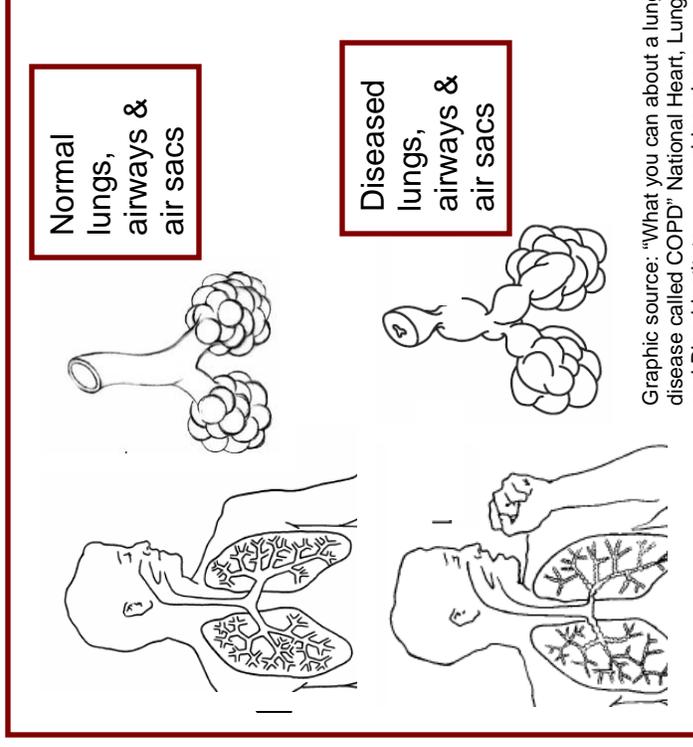
The following actions will help keep your COPD under control and help you to stay out of the hospital or emergency room:

- Stop smoking – even when you already have COPD, quitting smoking can help your lungs work better
- Get a flu vaccine every year
- Get a pneumonia vaccine at least once – your doctor may recommend that you have this vaccine every 5 to 10 years
- Decrease your risk of infection
 - ✓ Wash your hands often
 - ✓ Stay away from persons with colds or flu
- Avoid exposure to things that irritate your lungs
 - ✓ Extreme weather – very hot or very cold
 - ✓ Tobacco smoke
 - ✓ Smog – pay attention to air quality alerts and stay indoors as much as possible during alert times

What does COPD mean?

What does COPD mean?

- COPD is a lung disease.
- The airways that carry air to your lungs become narrowed and it becomes harder for you to breathe.
- There are tiny air sacs where the airways end in your lungs.
- These air sacs don't empty and your lungs feel full when you have COPD.
- Besides feeling short of breath, you may cough more often and cough up mucous.
- Shortness of breath may keep you from doing things you would like to do.



Graphic source: "What you can about a lung disease called COPD" National Heart, Lung and Blood Institute www.goldcopd.com

Why Exercise When You Have COPD?

Exercise is important when you have COPD or other lung diseases. Even if you have severe shortness of breath, you can benefit from an exercise program. Exercises may include chair exercises, walking, or using an exercise bike.

Exercise will help you to:

- Improve your ability to cope with shortness of breath
- Increase your energy level and make you feel less tired
- Feel better!

Before starting an exercise program, your COPD symptoms should be under control. Talk to your doctor if you think you are ready for an exercise program.

The information in this booklet will give you information to help you better understand your lung disease and get you started on a home exercise program. Your home care nurse and therapist will teach you and answer questions you may have about your disease and about pulmonary rehabilitation.

Nutrition and COPD

It is important to eat a healthy diet when you have COPD. If you do not eat enough, you will have less energy. If you are overweight, it will be harder to be active and you may have more shortness of breath.

There are certain things that make it easier for you to eat when you have COPD.

- Eat a balanced diet with enough calories
- Ask your doctor or nurse if vitamin supplements would be helpful
- Drink enough fluids – this helps keep your mucous looser
- Eat smaller meals more often
- Decrease the amount of gas forming foods you eat – they make your stomach fuller. This may increase shortness of breath.
- Include fiber in your diet to decrease constipation
- Eat slowly and talk less while you eat
- Sit in a chair that allows for good posture while you eat
- Avoid activity or exercise for an hour after you eat

Conserve Your Energy:

Learn how to pace your activities or do them in an easier way. You will do more and be less short of breath. A few examples are:

- Walk at a slow and comfortable pace
- Do activities at a slow and comfortable pace
- Do things sitting down
- Put things that you need in one place that is easy to reach
- Use a bath stool or bench during bathing
- Consider sponge bathing
- Dress seated instead of standing
- Consider use of bedside commode
- Rest after you eat
- Avoid shopping at busy times of the day
- Go to places that do not have a lot of stairs
- Prepare for activities by resting first and using breathing techniques
- Ask for help when you need it

How does your shortness of breath affect you?

Rate yourself using this table:

I become → When I ↓	a <u>little</u> short of breath	<u>somewhat</u> short of breath	<u>very</u> short of breath
Get dressed			
Bathe			
Make meals			
Eat			
Do laundry			
Do housework			
Walk around inside my house			
Walk around outside			

Six Minute Walk

- Your therapist may do a test with you called the 6 minute walk.
- This is not a race. It is used to see how far you can walk in a 6 minute period and see what types of symptoms you have during activity.
- Your oxygen level may be measured during the 6 minute walk using an “oximeter.”
- The 6-minute walk is usually done before you start your exercise program and about 2 months later.
- You will see an improvement in distance walked.

You should monitor yourself for *fatigue* and *shortness of breath* when you exercise. Your home care nurse or therapist will teach you how to use the Borg Scale so that you can rate your shortness of breath and/or fatigue during activity and exercise.

Modified Borg Scale

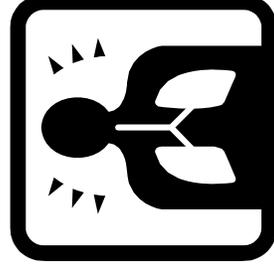
Scale	Severity
0	No breathlessness/fatigue at all
1	Very Slight Breathlessness/Fatigue
2	Slight Breathlessness/Fatigue
3	Moderate Breathlessness/Fatigue
4	Somewhat Severe Breathlessness/Fatigue
5	Severe Breathlessness/Fatigue
6	
7	Very Severe Breathlessness/Fatigue
8	
9	Very Very Severe Breathlessness/Fatigue
10	Maximum breathlessness/Fatigue

Diaphragmatic Breathing:

Diaphragmatic breathing helps the diaphragm move. The diaphragm is the large muscle underneath your lungs. This type of breathing technique is helpful for some patients.

Use diaphragmatic breathing during exercise and when you feel short of breath.

- Inhale. Sit comfortably in a chair. Place one hand on your stomach and one hand on your chest. Breathe air in through your nose slowly. Feel your stomach grow larger.
- Exhale. Breathe out slowly through pursed lips. Feel your stomach muscles tighten.
- Continue diaphragmatic breathing until you feel calmer and less short of breath.



Your Exercise Program

Your therapist will work with you to develop an exercise program that is right for you. Exercise should include both arm and leg exercises. The following are some suggestions for types of exercise.

- Stretching to increase flexibility
- Chair exercises
- Walking outside
- Walking on a treadmill
- Riding a stationary bike
- Tai Chi
- Low impact aerobics
- Dancing
- Swimming
- Water aerobics (in a warm water pool)

Exercise safely

- Dress comfortably and wear shoes that support your feet.
- Use oxygen if it is prescribed for use with activity.
- Use pursed lip breathing to control shortness of breath
- Pace yourself and stop to rest when needed
- Rate your shortness of breath using the Modified Borg Scale- page 10
- Use a short acting bronchodilator 20-30 minutes before exercise, if your doctor has instructed you to do
- Your therapist will help you to start exercise slowly. For example, 15 minutes, 3 to 4 times a week. Then, each week you can move a little faster and work a little longer.
- Your target exercise program: _____ minutes _____ times per week