



Complete Summary

GUIDELINE TITLE

Chronic obstructive pulmonary disease. Nutrition management for older adults.

BIBLIOGRAPHIC SOURCE(S)

Harmon-Weiss S. Chronic obstructive pulmonary disease. Nutrition management for older adults. Washington (DC): Nutrition Screening Initiative (NSI); 2002. 11 p. [38 references]

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT
CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY

SCOPE

DISEASE/CONDITION(S)

- Chronic obstructive pulmonary disease (COPD)
- Nutritional complications of COPD, including protein energy malnutrition

GUIDELINE CATEGORY

Counseling
Evaluation
Management
Prevention
Risk Assessment
Screening

CLINICAL SPECIALTY

Family Practice
Geriatrics
Infectious Diseases
Internal Medicine
Nutrition

Physical Medicine and Rehabilitation
Preventive Medicine
Pulmonary Medicine

INTENDED USERS

Advanced Practice Nurses
Dietitians
Health Care Providers
Nurses
Physician Assistants
Respiratory Care Practitioners

GUIDELINE OBJECTIVE(S)

To provide nutrition screening and intervention strategies for chronic obstructive pulmonary disease (COPD) that will enhance disease management and health care outcomes, and will positively impact individual health and quality of life of older adults

TARGET POPULATION

Older adults with chronic obstructive pulmonary disease (COPD)

INTERVENTIONS AND PRACTICES CONSIDERED

Nutrition Screening

1. Evaluation of food, nutrient, and fluid intake
2. Measurement of height and weight and calculation of body mass index (BMI)
3. Assessment of handgrip strength
4. Evaluation of ability to walk, exercise tolerance, and ability to carry out activities of daily living
5. Evaluation of serum albumin
6. Spirometry testing
7. Evaluation of current medications and supplements
8. Assessment of immunization status

Nutrition Interventions

1. Smoking cessation
2. Maintenance of reasonable body weight
3. Maintenance of adequate dietary intake of vitamins/minerals (Note: use of omega-3 fatty acids and high-dose antioxidants is considered controversial.)
4. Encouragement of moderate physical activity
5. Pneumococcal and influenza vaccinations

MAJOR OUTCOMES CONSIDERED

- Risk for development of chronic obstructive pulmonary disease (COPD)
- Impact of nutritional status on COPD and its symptoms

- Impact of COPD on health services utilization and cost
- Morbidity and mortality related to COPD

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Informal Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Professionals with expertise in nutrition, medicine, and allied disciplines served as authors and reviewers.

The information in A Physician's Guide to Nutrition in Chronic Disease Management for Older Adults-Expanded Version is derived from The Role of Nutrition in Chronic Disease Care, a 1997 Nutrition Screening Initiative (NSI) publication. The authors updated their 1997 work through an extensive review of

the literature, using evidence-based data where possible and consensus-based information when definitive outcomes were not available.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

Impact of Chronic Obstructive Pulmonary Disease (COPD) on Health Services Utilization and Cost

COPD presents in people at the height of their productive years. It disables them with exertional shortness of breath. People unable to breathe have difficulty earning a living and are prone to utilize the health care system more frequently. Despite the considerable illness and economic burdens COPD imposes and the increasing need to consider cost efficiency/effectiveness in terms of health care expenditures, information regarding these issues is lacking. Although the need for such information was clearly stated in 1992 and some preliminary work has been done in regard to asthma, very little data exist upon which clinical care decisions can be based, particularly in regard to the efficacy of treatment of COPD.

In 1997, COPD accounted for approximately 13.4 million office visits to physicians and 3.4 million hospital days. The economic cost of this disease was estimated to be \$20.7 billion in health care expenditures and indirect costs of \$11.2 billion.

METHOD OF GUIDELINE VALIDATION

External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

An interdisciplinary advisory committee of nationally recognized practitioners in medicine, nutrition, and geriatrics reviewed the chapter related to their area of expertise.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Nutrition Screening Guidelines

At a minimum, nutrition screening for individuals with chronic obstructive pulmonary disease (COPD) should include the following:

- Evaluation of food, nutrient, and fluid intake
- Measurement of height (annually in those aged 65 years and older)
- Measurement of body weight at each office visit, calculation of body mass index (BMI).
- Assessment of handgrip strength

- Evaluation of ability to walk specified distances/exercise tolerance
- Evaluation of the ability to carry out activities of daily living (ADLs) and instrumental activities of daily living (IADLs)
- Evaluation of serum albumin level
- Periodic spirometry testing
- Evaluation of current medications use and dietary supplements
- Assessment of immunization status

Nutrition Intervention Guidelines

Nutrition intervention in people with COPD should consist of one or more of the following:

- Stop smoking.
- Maintain a reasonable weight or increase weight if underweight. Involuntary weight loss to less than 90% of ideal weight is associated with significant morbidity and mortality. When food intake is inadequate, the use of enteral or parenteral nutrition therapies should be considered.
- Maintain an adequate dietary intake of vitamins and minerals. Encourage appropriate intakes of fish, fat, and especially fresh fruits and vegetable. Vitamin/mineral supplements should be considered in those unable to consume adequate nutrients from food. The use of supplements of omega-3 fatty acids and high dose antioxidants is controversial.
- Encourage moderate physical activity. Regular exercise helps to maintain or improve muscle mass and tone, functional ability, and appetite.
- Provide appropriate influenza and pneumococcal immunizations.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Benefits of Nutrition Management to Patients

The benefit of nutritional screening and intervention in patients with chronic obstructive pulmonary disease (COPD) can be significant. Maintenance of reasonable weight is associated with increased longevity, improved pulmonary function, improved muscle function, and decreased incidence of pneumonia and other respiratory infections.

Benefits of Nutrition Management to Health Services Providers

The incidence of poor nutritional status appears to be greatest in those patients who require the largest number of services from the health care system (i.e., hospitalized patients). Maintenance of optimal achievable nutritional status in these patients will reduce the need for hospitalization and the costs associated with it.

Subgroups Most Likely to Benefit (Subgroups at Risk)

Approximately 80 to 90% of COPD cases are caused by cigarette smoking. Other risk factors include heredity, a history of childhood respiratory infections, frequent lung infections, and exposure to air pollution at work and in the environment.

POTENTIAL HARMS

Achieving optimal nutritional status in the chronic obstructive pulmonary disease (COPD) patients may be fraught with increasing problems if they are at the end of the weight scale, due to glucose overload syndrome.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Health care professionals must decide how best to implement these recommendations in multiple settings and in patients with diverse needs. It is essential to develop a habitual approach to the nutrition screening and assessment of nutritional status in older adults and to develop policies, protocols, and procedures to ensure the implementation of disease-specific nutritional interventions. The reader should refer to other Nutrition Screening Initiative (NSI) materials for additional information and to facilitate a systematic approach to nutritional care. NSI screening tools are included as appendices of the original guideline document -- DETERMINE Your Nutritional Health Checklist and Levels I and II Screens. The Checklist was developed as a self-administered tool designed to increase public awareness of the importance of nutritional status to health and to encourage older people to discuss their own nutritional status with their primary provider. Based on this guided discussion, the provider can decide if additional screening or assessment is indicated. The Level I Screen was designed for administration by non-physician health care providers in community settings while Level II requires administration by physicians and physician-extenders that have the ability to order and interpret laboratory parameters indicative of nutritional health.

Evaluation Criteria to Document Improved Health Outcomes

Evaluation criteria which help document the impact of nutrition screening and intervention on the health status of patients with chronic obstructive pulmonary disease (COPD) are consistent with the goals of nutrition screening and intervention for COPD and are listed below:

- Smoking cessation

- Maintenance of a reasonable weight/weight stabilization with body mass index (BMI) 22 to 27
- Adequacy of food, calorie, and nutrient intake
- Serum albumin level >3.5g/dl
- Normalization/improvement in respiratory rate, decreased symptoms
- Pneumococcal/influenza vaccination
- Enhanced exercise tolerance (ability to walk a defined distance)
- Reduction in anxiety and depression
- Absolute forced expiratory volume (FEV1) >40% of the predicted normal value
- Forced vital capacity (FVC) normal
- FEV1/FVC Ratio > 70% of predicted normal
- Immunocompetence maintained (delayed cutaneous hypersensitivity to common recall antigens, normal T-cell function and/or complement activity)
- Prevention/improvement in comorbid conditions associated with COPD

Evaluation Criteria to Document the Impact of Nutrition Management on the Health Care System

In addition to the evaluation criteria listed above, the following may be used to assess the impact of nutrition screening, assessment and intervention for COPD on the health care delivery system. Reductions or improvements in these indicators could be used to document a positive impact of nutrition screening and intervention in populations to whom routine and appropriate nutritional care is made available.

- Incidence/exacerbation of COPD
- Incidence of pneumonia/acute respiratory infections
- Incidence/improvement in comorbidities associated with COPD
- Antibiotic use (frequency, type, quantity)
- Rates of admission or length of stay in acute or long term settings for the management of COPD or its associated comorbidities
- Frequency of visits to the health care provider needed to successfully manage COPD

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Harmon-Weiss S. Chronic obstructive pulmonary disease. Nutrition management for older adults. Washington (DC): Nutrition Screening Initiative (NSI); 2002. 11 p. [38 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2002

GUIDELINE DEVELOPER(S)

American Academy of Family Physicians - Medical Specialty Society
American Dietetic Association - Professional Association
Nutrition Screening Initiative - Professional Association

GUIDELINE DEVELOPER COMMENT

The Nutrition Screening Initiative (NSI) is a partnership of the American Academy of Family Physicians (AAFP) and the American Dietetic Association (ADA). It is funded in part through a grant from Ross Products Division, Abbott Laboratories.

Additional information can be obtained from the [AAFP Web site](#) and the [ADA Web site](#).

SOURCE(S) OF FUNDING

The Nutrition Screening Initiative (NSI) is funded in part through a grant from Ross Products Division, Abbott Laboratories.

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Primary author: Sandra Harmon-Weiss, MD, Head of Government Programs, Aetna U.S. Healthcare, Blue Bell, PA

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available from the [American Academy of Family Physicians \(AAFP\) Web site](#) and to members only from the [American Dietetic Association \(ADA\) Web site](#).

Print copies: Not available

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Nutrition Screening Initiative (NSI). A physician's guide to nutrition in chronic disease management for older adults. Washington (DC): Nutrition Screening Initiative (NSI); 2002. 18 p.

Electronic copies available in Portable Document Format (PDF) from the [American Academy of Family Physicians \(AAFP\) Web site](#) and the [American Dietetic Association \(ADA\) Web site](#).

Electronic copies also available for download in Personal Digital Assistant (PDA) format from the [American Academy of Family Physicians \(AAFP\) Web site](#).

Print copies: Available from Ross Educational Service Materials; Phone: (800) 986-8503; Web site: www.Ross.com/nsi.

PATIENT RESOURCES

The following is available:

- Managing chronic disease. Food tips if you need extra nutrients. In: Nutrition Screening Initiative (NSI). A physician's guide to nutrition in chronic disease management for older adults. Washington (DC): Nutrition Screening Initiative (NSI); 2002. 4 p.

Electronic copies available in Portable Document Format (PDF) from the [American Academy of Family Physicians \(AAFP\) Web site](#) and the [American Dietetic Association \(ADA\) Web site](#).

Electronic copies also available for download in Personal Digital Assistant (PDA) format from the [American Academy of Family Physicians \(AAFP\) Web site](#).

Print copies: Available from Ross Educational Service Materials; Phone: (800) 986-8503; Web site: www.Ross.com.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By

providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on April 16, 2004. The updated information was verified by the guideline developer on June 21, 2004.

COPYRIGHT STATEMENT

This NGC summary is based on the original guideline, which is subject to the guideline developer's copyright restrictions. For reprint permissions, please contact Marti Andrews, Ross Products Division, at (614) 624-3381, e-mail: marti.andrews@abbott.com.

© 1998-2004 National Guideline Clearinghouse

Date Modified: 11/15/2004

FIRSTGOV

