GIMBE®
Gruppo Italiano per la Medicina Basata sulle Evidenze
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Decisioni Cliniche e Prove di Efficacia
Il Governo Clinico nelle Cure Primarie
Rimini, 3-4 ottobre 2008

Medicina e Persona

Workshop Clinici Interattivi (1)

Management della BPCO
Aderiamo alle linee guida o siamo guidati dall'empirismo?

Modesto Fantini
Alfredo Potena

Scenario Clinico

• La signora Lisa è una pensionata di 70 anni, ex insegnante vedova senza figli che vive da sola, in lieve sovrappeso (BMI 26)

• Da circa 15 anni diagnosi di ipertensione essenziale, ben controllata dall'associazione ramipril + idroclorotiazide; nel febbraio 2006 visita cardiologica, ECG, ECG nella norma. Non altri fattori di rischio cardiovascolare

• La vedo di rado: effettua l'autocontrollo della PA e per la ripetizione delle ricette si serve della mia segretaria

Scenario Clinico

• Nulla di rilevante all'anamnesi familiare e fisiologica

• Nella storia recente:
- da circa 3 anno saltuari episodi di flogosi catarrale delle vie respiratorie risolti in 5-7 giorni con mucolitici e, talora, antibiotici
- frattura traumatica del polso dx nel gennaio 2007, guarita senza esiti funzionali

Scenario Clinico

• Nell'ottobre 2007 viene in ambulatorio lamentando una tosse catarrale che persiste da circa tre settimane, dopo un episodio di faringodinia associato, nei primi 2-3 gg, a lieve rialzo termico

• Traspare una certa preoccupazione della paziente, sia per la durata dell'episodio (rispetto ai precedenti), sia soprattutto per aver notato un certo affanno durante le sue passeggiate serali con le amiche

Scenario Clinico

• Obiettivamente:
- lieve riduzione del murmure e qualche sibilo espiratorio
- PA 130/80 mmHg, senza alcun segno di scompenso cardiaco

• Durante il colloquio la signora Luisa mi ricorda che, da oltre 40 anni, fuma circa 15 sigarette/die (30 pack/years*), dato rilevante purtroppo mai registrato in cartella

*n° di anni per i quali si è fumato x il numero di pacchetti (o frazioni di pacchetto) al giorno

Scenario Clinico

• In realtà, al momento della diagnosi di ipertensione le avevo consigliato di smettere, ma poi – anche per le rare occasioni – il problema era caduto nel dimenticatoio

• Nell'ipotesi di riacutizzazione di bronchite cronica o di BPCO richiedo: rx torace e spirometria

Clinical Question

1. Considerata la prevalenza della BPCO, ritieni efficace lo screening con la spirometria negli adulti > 40 anni per ridurre la morbilità/mortalità?

1. No
2. Sì, in tutti i pazienti
3. Sì, solo nei fumatori

Agency for Healthcare Research and Quality

Evidence Report/Technology Assessment

Number 121

Use of Spirometry for Case Finding, Diagnosis, and Management of Chronic Obstructive Pulmonary Disease (COPD)

Summary

Author: Wilt TJ, Niewoehner D, Kim C, Kane RL, Linabery A, Tacklind J, MacDonald R, Rutks I

AHRQ Publication No. 05-E017-2
September 2005

Annals of Internal Medicine | CLINICAL GUIDELINES

Screening for Chronic Obstructive Pulmonary Disease Using Spirometry: U.S. Preventive Services Task Force Recommendation Statement

U.S. Preventive Services Task Force*

Description: New U.S. Preventive Services Task Force (USPSTF) recommendation about screening for chronic obstructive pulmonary disease (COPD) using spirometry.

Methods: The USPSTF weighed the benefits (prevention of ≥1 exacerbation and improvement in respiratory-related health status measures) and harms (time and effort required by both patients and the health care system, false-positive screening tests, and adverse effects of subsequent unnecessary therapy) of COPD screening identified in the accompanying review of the evidence. The USPSTF did not consider the financial costs of spirometry testing or COPD therapies.

Recommendation: Do not screen adults for COPD using spirometry. (Grade D recommendation)

Ann Intern Med. 2008;148:529-534. www.annals.org

For author affiliations, see end of text.
*For a list of members of the U.S. Preventive Services Task Force, see the Appendix (available at www.annals.org).

Annals of Internal Medicine | CLINICAL GUIDELINES

Screening for Chronic Obstructive Pulmonary Disease Using Spirometry: Summary of the Evidence for the U.S. Preventive Services Task Force

Kenneth Lin, MD; Bradley Watkins, MD; Tamara Johnson, MD, MS; Joy Anne Rodriguez, MD, MPH; and Mary B. Barton, MD, MPP

Ann Intern Med. 2008;148:535-543.

Key Question	Studies Identified	Summary of Evidence
Does screening for COPD with spirometry reduce morbidity and mortality?	No RCTs directly address this question	No evidence is available to answer this question.
What is the prevalence of COPD in the general population? Do risk factors reliably discriminate between high-risk and average-risk populations?	Population-based surveys (including NHANES) from 7 countries NHANES I and III (6, 7)	Prevalence is 8.6% to 21.1%, depending on COPD definition, and is 7.2% in the U.S. population using the GOLD definition. Severe airflow obstruction is higher in older adults and in current and past smokers.
What are the adverse effects of screening for COPD with spirometry?	3 small studies of spirometry performed in pulmonary function laboratories	Spirometry seems to be physically safe; some false-positive test results occur in asymptomatic patients.
Do individuals with COPD detected by screening spirometry have improved smoking cessation rates compared with usual smokers?	8 RCTs and 2 systematic reviews with up to 36 months of follow-up; only 2 RCTs evaluated the independent motivational effect of spirometry	Spirometry does not seem to increase smoking cessation rates, but further studies may be needed.
Does pharmacologic treatment, oxygen therapy, or pulmonary rehabilitation for COPD reduce morbidity and mortality?	48 RCTs and 10 meta-analyses identified in 2007 systematic review by Wilt et al. (5)	Pharmacologic treatments reduce exacerbations in patients with symptomatic severe COPD and have a small effect on all-cause mortality. Oxygen therapy reduces mortality in patients with resting hypoxia. Pulmonary rehabilitation improves some health status measures. None of these therapies has been tested in patients with airflow obstruction who do not recognize or report symptoms.
What are the adverse effects of COPD treatments?	12 fair- to good-quality systematic reviews	Common minor adverse effects include dry mouth, urinary retention, tachycardia, oropharyngeal candidiasis, and easy bruising. Major adverse effects seem rare.

USPSTF, 2008

Table 1. **Projected Outcomes of Screening 10 000 Asymptomatic Adults for Chronic Obstructive Pulmonary Disease Using Spirometry***

Variable	Current Smoker	Never Smoker	Age 40–49 y	Age 50–59 y	Age 60–69 y	Age 70–74 y
Patients screened, n	10 000	10 000	10 000	10 000	10 000	10 000
Patients with FEV$_1$ <80% of predicted, n†	507	98	86	302	376	456
Patients prevented from having ≥1 COPD exacerbation, n	12	5	4	15	22	25
NNS to prevent 1 COPD exacerbation over 6–36 mo	813	2000	2500	667	455	400

USPSTF, 2008

RECOMMENDATIONS OF OTHERS

The American College of Physicians recommended in 2007 that "spirometry should not be used to screen for airflow obstruction in asymptomatic individuals," including those with COPD risk factors (11).

The Global Initiative for Chronic Obstructive Lung Disease updated its consensus guideline in 2007. Although the guideline did not address population-based screening using spirometry, it recommended that clinicians consider a diagnosis of COPD "in any patient who has dyspnea, chronic cough or sputum production, and/or a history of exposure to risk factors for the disease" and that the "diagnosis should be confirmed by spirometry" (12).

In 2004, the American Thoracic Society and the European Respiratory Society recommended performing spirometry on all persons with tobacco exposure, a family history of chronic respiratory illness, or respiratory symptoms (13).

USPSTF, 2008

Scenario Clinico

• Prescrivo: claritromicina 500 mg x 2 per 7 gg, salbutamolo spray al bisogno

• Riguardo al fumo, la signora Luisa, consapevole dei potenziali rischi non ha alcuna intenzione di smettere perché "è l'unico piacere che mi concedo"

Clinical Question

1. BPCO

2. Nel trattamento della BPCO riacutizzata, ritieni che gli antibiotici *second-line*, rispetto a quelli *first-line* siano:

1. Più efficaci
2. Equivalenti
3. Meno efficaci

Second-line: amoxicillin/clavulanic acid, macrolides (ie, roxithromycin, clarithromycin, and azithromycin), second-generation or third-generation cephalosporins (ie, cefaclor), and quinolones
First-line: amoxicillin, ampicillin,TMP/SMX, doxycycline

NHS
National Institute for Clinical Excellence

Antibiotics

1.3.5.15	Antibiotics should be used to treat exacerbations of COPD associated with a history of more purulent sputum.	A
1.3.5.16	Patients with exacerbations without more purulent sputum do not need antibiotic therapy unless there is consolidation on a chest radiograph or clinical signs of pneumonia.	B
1.3.5.17	Initial empirical treatment should be an aminopenicillin, a macrolide, or a tetracycline. When initiating empirical antibiotic treatment, prescribers should always take account of any guidance issued by their local microbiologists.	D

CHEST Original Research

COPD

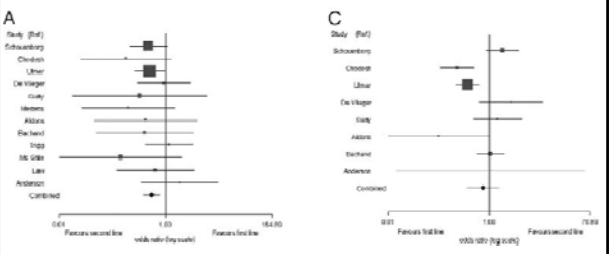
Comparison of First-Line With Second-Line Antibiotics for Acute Exacerbations of Chronic Bronchitis*

A Metaanalysis of Randomized Controlled Trials

George Dimopoulos, MD, FCCP; Ilias I. Siempos, MD; Ioannis P. Korbila, MD; Katerina G. Manta, MD; and Matthew E. Falagas, MD, MSc, DSc

Background: Although acute exacerbations of chronic bronchitis (AECBs) are common, there has been no metaanalysis that focused on the optimum regimen.
Methods: To evaluate the comparative effectiveness and safety of first-line antimicrobial agents (*ie*, amoxicillin, ampicillin, pivampicillin, trimethoprim/sulfamethoxazole, and doxycycline) and second-line antimicrobial agents (*ie*, amoxicillin/clavulanic acid, macrolides, second-generation or third-generation cephalosporins, and quinolones) for the treatment of patients with AECB, in an era of increasing antimicrobial resistance among the microbes responsible for AECB, we performed a metaanalysis of randomized controlled trials (RCTs) retrieved through searches of the PubMed and the Cochrane databases.
Results: Twelve RCTs were included in the metaanalysis. First-line antibiotics were associated with lower treatment success compared to second-line antibiotics in the clinically evaluable patients (odds ratio [OR], 0.51; 95% confidence interval [CI], 0.34 to 0.75). There were no differences among the compared regimens regarding mortality (OR, 0.64; 95% CI, 0.25 to 1.66) or treatment success (OR, 0.56; 95% CI, 0.22 to 1.43) in microbiologically evaluable patients, or adverse effects in general (OR, 0.75; 95% CI, 0.39 to 1.45) or diarrhea in particular (OR, 1.58; 95% CI, 0.74 to 3.35).
Conclusions: Compared to first-line antibiotics, second-line antibiotics are more effective, but not less safe, when administered to patients with AECB. The available data did not allow for stratified analyses according to the presence of risk factors for poor outcome, such as increased age, impaired lung function, airway obstruction, and frequency of exacerbations; this fact should be taken into consideration when interpreting the findings of this metaanalysis.

(*CHEST 2007; 132:447–455*)



Efficacy **Safety**

Scenario Clinico

- Dopo circa una settimana, la paziente torna in ambulatorio: riferisce di essere migliorata dopo qualche giorno, nonostante continui a fumare
- Rx torace: non lesioni pleuro-parenchimali a focolaio in atto; accentuazione della trama broncovascolare di tipo bronchitico cronico.

Scenario Clinico

- Spirometria (post bronco-dilatatore)
  - FEV1 53% (teorico 3.20, misurato 1.70)
  - FEV1/CV 56% (teorico 78, misurato 44)
  - CV 93% (teorico 4,10, misurato 3,80)
  - CVF 88% (teorico 4,10, mis. 3,60)
- Diagnosi funzionale: ostruzione moderata (stadio II, secondo GOLD 2007)

Figura 2. Classificazione spirometrica di gravità della BPCO basata sul VEMS post-broncodilatatore

Stadio I: Lieve	• VEMS/CVF <0.7 • VEMS ≥ 80% del predetto
Stadio II: Moderata	• VEMS/CVF <0.7 • 50% ≤VEMS <80% del predetto
Stadio III: Grave	• VEMS/CVF <0.7 • 30% ≤VEMS <50% del predetto
Stadio IV: Molto Grave	• VEMS/CVF <0.7 • VEMS <30% del predetto o VEMS <50% del predetto con insufficienza respiratoria cronica

GOLD, 2008

Scenario Clinico

• Ritengo confermato il sospetto di BPCO e richiedo una consulenza pneumologica con emogasanalisi

• Prescrivo tiotropio (18 mcg) per via inalatoria e salbutamolo al bisogno

Clinical Question

1. BPCO

3. Ritieni appropriata la prescrizione del tiotropio?

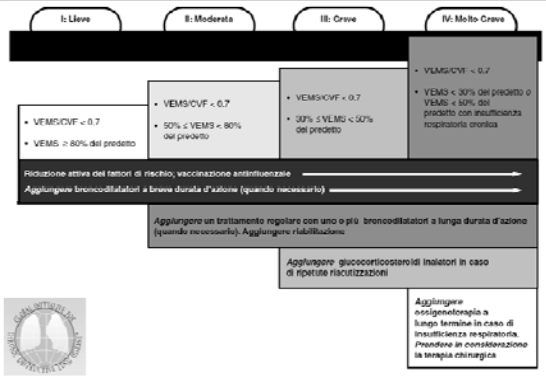
1. No
2. Sì

NHS
National Institute for Clinical Excellence

1.2.2 Inhaled bronchodilator therapy

1.2.2.1	Short-acting bronchodilators, as necessary, should be the initial empirical treatment for the relief of breathlessness and exercise limitation.	B
1.2.2.2	The effectiveness of bronchodilator therapy should not be assessed by lung function alone but should include a variety of other measures such as improvement in symptoms, activities of daily living, exercise capacity, and rapidity of symptom relief.	D
1.2.2.3	Patients who remain symptomatic should have their inhaled treatment intensified to include long-acting bronchodilators or combined therapy with a short-acting beta$_2$-agonist and a short-acting anticholinergic.	A
1.2.2.4	Long-acting bronchodilators should be used in patients who remain symptomatic despite treatment with short-acting bronchodilators because these drugs appear to have additional benefits over combinations of short-acting drugs.	A

NICE 2004



GOLD, 2008

Farmaco*	Inalatore predosato (mcg)	Soluzione per Aerosol (mg/ml)	Orale	Fiale per iniezione (mg)	Durata d'azione (ore)
Anticolinergici					
A breve durata d'azione					
Ipratropio Bromuro	20, 40 (MDI)	0.25-0.5			6-8
Oxitropio Bromuro		1.5			7-9
A lunga durata d'azione					
Tiotropio Bromuro	18 (DPI)				24+

GOLD, 2008

Scenario Clinico

• Visti i risultati della spirometria, torno alla carica per convincere la paziente a smettere di fumare, accennando ai supporti farmacologici per la disassuefazione

Clinical Question

4. Nel tuo setting assistenziale qual è il principale ostacolo per implementare i programmi di disassuefazione al fumo?

1. Attitudine del medico alla loro prescrizione
2. Accettazione del paziente
3. Ostacoli organizzativi
4. Altro

NHS
National Institute for Clinical Excellence

1.2.1 Smoking cessation

1.2.1.1	An up-to-date smoking history, including pack years smoked (number of cigarettes smoked per day, divided by 20, multiplied by the number of years smoked), should be documented for everyone with COPD.	D
1.2.1.2	All COPD patents still smoking, regardless of age, should be encouraged to stop, and offered help to do so, at every opportunity.	A
1.2.1.3	Unless contraindicated, bupropion or nicotine replacement therapy combined with an appropriate support programme should be used to optimise smoking quit rates for people with COPD.	B

NICE, 2004

BMJ Clinical Evidence

Chronic obstructive pulmonary disease

NON-DRUG INTERVENTIONS

Beneficial

→ Psychosocial plus pharmacological interventions for smoking cessation. 14

Pulmonary rehabilitation. 16

Likely to be beneficial

General physical activity. 17

Inspiratory muscle training. 16

Peripheral muscle training. 17

Unknown effectiveness

→ Pharmacological interventions alone for smoking cessation. 14

→ Psychosocial interventions alone for smoking cessation. 14

Clinical Evidence, 2008

Clinical Practice Guideline

Treating Tobacco Use and Dependence: 2008 Update

U.S. Department of Health and Human Services
Public Health Service
May 2008

7. Counseling and medication are effective when used by themselves for treating tobacco dependence. The combination of counseling and medication, however, is more effective than either alone. Thus, clinicians should encourage all individuals making a quit attempt to use both counseling and medication.

Figura 6. Brevi Strategie per Aiutare il Paziente che Voglia Smettere di Fumare (72-75)

1. Domandare: Identificare sistematicamente tutti i fumatori ad ogni visita.
Implementare un sistema che garantisca che, per TUTTI i pazienti in TUTTE le visite, la condizione di fumatore sia indagata e documentata.

2. Informare: Invitare con insistenza tutti i fumatori a smettere.
In un modo chiaro, deciso e personalizzato invitare con insistenza tutti i fumatori a smettere.

3. Valutare: Valutare la volontà di fare un tentativo di smettere.
Domandare ad ogni fumatore se ha la volontà al momento di fare un tentativo di smettere di fumare (ad esempio entro i successivi 30 giorni).

4. Assistere: Aiutare il paziente a smettere.
Aiutare il paziente con un programma di cessazione; fornire consigli pratici; supporto sociale all'interno del programma di trattamento; aiutare il paziente ad ottenere supporto sociale al di fuori del programma di trattamento; prescrivere una terapia farmacologica se appropriata; fornire materiale supplementare.

5. Organizzare: Programmare visite di follow-up.
Programmare contatti di follow-up sia attraverso incontri che telefonicamente.

GOLD, 2007

Clinical Question

1. BPCO

5. Qual vaccinazioni avresti consigliato alla signora Lisa?

1. Nessuna
2. Anti-influenzale
3. Anti-pneumococcica
4. Entrambe

Vaccini. Il *vaccino anti-influenzale* riduce l'incidenza di malattie gravi (135) e la mortalità nei pazienti affetti da BPCO nella misura del 50% (136,137) **(Evidenza A)**.

È raccomandato l'impiego di vaccini contenenti virus uccisi o attenuati (138), più efficaci nei pazienti più anziani con BPCO (139). I ceppi sono modificati ogni anno, la somministrazione dovrebbe avvenire una volta all'anno (140). Il vaccino polisaccaridico anti-pneumococcico è raccomandato nei pazienti con BPCO più anziani dell'età di 65 anni (141,142); riduce l'incidenza delle polmoniti acquisite in comunità anche nei soggetti di età inferiore a 65 anni con VEMS<40% del predetto (143) **(Evidenza B)**.

GOLD, 2008

NHS
National Institute for Clinical Excellence

1.2.11.1 Pneumococcal vaccination and an annual influenza vaccination should be offered to all patients with COPD as recommended by the Chief Medical Officer. HSC

NICE, 2004

Poole PJ, Chacko E, Wood-Baker RWB, Cates CJ

Influenza vaccine for patients with chronic obstructive pulmonary disease

Cochrane Database of Systematic Reviews 2008, Issue 3

CONCLUSION

• It appears, from the limited number of studies performed, that inactivated vaccine reduces exacerbations in COPD patients.

• There is a mild increase in transient local adverse effects with vaccination, but no evidence of an increase in early exacerbations.

Granger R, Walters J, Poole PJ, et al.

Injectable vaccines for preventing pneumococcal infection in patients with COPD

Cochrane Database of Systematic Reviews 2008, Issue 3

CONCLUSION

• There is no evidence from randomised controlled trials that injectable pneumococcal vaccination in persons with COPD has a significant impact on morbidity or mortality.

• Further large randomised controlled trials would be needed to ascertain if the small benefits suggested by individual studies are real.

Scenario Clinico

• Suggerisco, oltre la vaccinazione antinfluenzale, quella anti-pneumococcica

Scenario Clinico

• Ai primi di dicembre, eseguita la consulenza pneumologica, la signora Luisa ritorna in ambulatorio: afferma di sentirsi bene, a parte un “lieve affanno” nel fare le scale

• EGA: pO2 68 mmHg, pCO2 44 mmHg

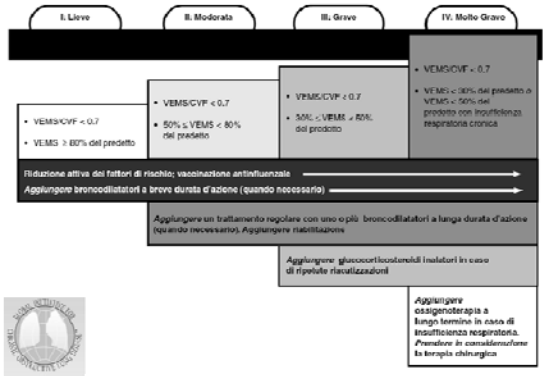
• Diagnosi: BPCO moderata con frequenti riacutizzazioni

• Lo specialista prescrive:
  - cessazione del fumo
  - sostituzione del tiotropio con l’associazione budesonide + formoterolo per via inalatoria
  - controllo clinico-spirometrico a 12 mesi

Clinical Question

6. Ritieni appropriata la prescrizione di budesonide-formoterolo per via inalatoria e la sospensione del tiotropio?

1. No
2. Sì
3. Sì, ma non avrei sospeso il tiotropio



GOLD, 2008

Scenario Clinico

• La signora Luisa ha recentemente provato i cerotti alla nicotina, ma continua a fumare circa 10 sigarette/die

• Assume la terapia suggerita dallo specialista anche se - dal numero di confezioni prescritte - non sembra seguire la posologia in maniera regolare

• Per il resto… conferma di sentirsi molto bene: fa le sue regolari passeggiate senza dispnea e non ha più avuto episodi di riacutizzazione

Clinical Question

7. L'educazione dei pazienti con BPCO al *self-management* è efficace nel migliorare gli esiti di salute e l'utilizzo dei servizi sanitari?

1. No
2. Sì

Effing TW, Monninkhof EM, van der Valk PDLPM, et al

Self-management education for patients with chronic obstructive pulmonary disease

Cochrane Database of Systematic Reviews 2008, Issue 3

CONCLUSION

• Self-management education is associated with a reduction in hospital admissions with no indications for detrimental effects in other outcome parameters

• However, because of heterogeneity in interventions, study populations, follow-up time, and outcome measures, data are still insufficient to formulate clear recommendations regarding the form and contents of self-management education programmes in COPD

• There is an evident need for more large RCTs

Effing TW, et al. CDSR, 2008

NHS
National Institute for Clinical Excellence

Self-management

1.2.18.24 Patients at risk of having an exacerbation of COPD should be given self-management advice that encourages them to respond promptly to the symptoms of an exacerbation.	A
1.2.18.25 Patients should be encouraged to respond promptly to the symptoms of an exacerbation by: ▪ starting oral corticosteroid therapy if their increased breathlessness interferes with activities of daily living (unless contraindicated) ▪ starting antibiotic therapy if their sputum is purulent ▪ adjusting their bronchodilator therapy to control their symptoms.	D

Clinical Question

8. Nei pazienti con BPCO, i programmi di disease management sono efficaci nel migliorare gli esiti di salute e l'utilizzo dei servizi sanitari?

1. No
2. Sì

REVIEW ARTICLE

Systematic Review of the Chronic Care Model in Chronic Obstructive Pulmonary Disease Prevention and Management

Sandra G. Adams, MD, MS; Paulla K. Smith, RRT; Patrick F. Allan, MD; Antonio Anzueto, MD; Jacqueline A. Pugh, MD; John E. Cornell, PhD

Arch Intern Med. 2007;167:551-561

Table 1. Interventions Categorized Into the Components of the Chronic Care Model

Chronic Care Model Component	Intervention
Self-management	Education (giving information alone) and/or Behavioral support (providing tools to modify behaviors) and/or Motivational (linking specific goals for behavioral changes to clinical information)
Delivery system design	Interventions that provided "advanced access" to medical care (24 h/d, 7 d/wk) for participants and/or Implemented practice teams to coordinate preventative measures for chronic care
Decision support	Used or implemented evidence-based guidelines and/or Integrated specialty expertise (eg, referrals for management of comorbidities) and/or Identified barriers to care and/or Performed performance reviews
Clinical information system	Clinical registries (population information databases) and/or Clinical reminders and/or Provider (physicians, nurses, respiratory therapists, pharmacists, etc) feedback

Conclusions: Limited published data exist evaluating the efficacy of CCM components in chronic obstructive pulmonary disease management. However, pooled data demonstrated that patients with chronic obstructive pulmonary disease who received interventions with 2 or more CCM components had lower rates of hospitalizations and emergency/unscheduled visits and a shorter length of stay compared with control groups. The results of this review highlight the need for well-designed trials in this population.

Arch Intern Med. 2007;167:551-561

Annals of Internal Medicine | CLINICAL GUIDELINES

Diagnosis and Management of Stable Chronic Obstructive Pulmonary Disease: A Clinical Practice Guideline from the American College of Physicians

Amir Qaseem, MD, PhD, MHA; Vincenza Snow, MD; Paul Shekelle, MD, PhD; Katherine Sherif, MD; Timothy J. Wilt, MD, MPH; Steven Weinberger, MD; and Douglas K. Owens, MD, MS, for the Clinical Efficacy Assessment Subcommittee of the American College of Physicians*

Ann Intern Med. 2007;147:633-638.

DISEASE MANAGEMENT AND PATIENT EDUCATION

The evidence did not show any effect of disease management programs or patient education on deaths, COPD exacerbations, reduction in all-cause readmissions, hospital length of stay, visits to primary care physicians, clinically meaningful improvement in the St. George Respiratory Questionnaire health status score, patient satisfaction, self-management skills, or adherence to treatment (46, 48).

Peytremann-Bridevaux I, Staeger P, Bridevaux PO, et al

Effectiveness of COPD disease-management programs: systematic review and meta-analysis

Am J Med 2008;121:433-443

METHODS

- Search of MEDLINE, EMBASE, CINAHL, PsychINFO, and the Cochrane Library for studies evaluating interventions meeting our operational definition of disease management: patient education, 2 or more different intervention components, 2 or more health care professionals actively involved in patients' care, and intervention lasting 12 months or more.
- Programs conducted in hospital only and those targeting patients receiving palliative care were excluded.
- Clinical outcomes considered were all-cause mortality, lung function, walking distance, health-related quality of life, symptoms, COPD exacerbations, health care use.

Peytremann-Bridevaux I, et al. Am J Med, 2008

RESULTS

- Data from 13 studies of disease-management programs:
  - significantly improved exercise capacity (32.2 m, 95% confidence interval [CI], 4.1-60.3)
  - decreased risk of hospitalization
  - moderately improved health-related quality
  - have no effect on all-cause mortality

Peytremann-Bridevaux I, et al. Am J Med, 2008

CONCLUSION

- COPD disease-management programs modestly improved exercise capacity, health-related quality of life, and hospital admissions, but not all-cause mortality
- Future studies should explore the specific elements or characteristics of these programs that bring the greatest benefit

Peytremann-Bridevaux I, et al. Am J Med, 2008