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3. MEDLINE; *PRIMARY HEALTH CARE/; 27412 results.
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14. MEDLINE; *EARLY DIAGNOSIS/; 304 results.
15. MEDLINE; 10 AND 14; 0 results.
16. MEDLINE; 6 AND 14; 2 results.
17. MEDLINE; PULMONARY DISEASE, CHRONIC OBSTRUCTIVE/pc [pc=Prevention & Control]; 407 results.
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21. MEDLINE; 11 AND 20; 4 results.
22. CINAHL; *PULMONARY DISEASE, CHRONIC OBSTRUCTIVE/; 4015 results.
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1. GP practices must ensure nurses are trained to do spirometry.

Citation: Nursing Times, 06 July 2010, vol./is. 106/26(8-8), 09547762

Author(s): Fletcher M

Language: English

Abstract: With the development of the national COPD strategy more spirometry is likely to be undertaken in primary care, but are nurses competent to carry it out, asks Monica Fletcher.

Publication Type: journal article

Subject Headings:
Clinical Competence
Family Practice
Office Nursing
Spirometry
Primary Health Care
Pulmonary Disease, Chronic Obstructive
Staff Development

Source: CINAHL

Full Text: Available in *print* at *Bolton PCT*

2. Respiratory therapists should offer spirometry expertise to local primary care providers.

Citation: Respiratory Care, June 2010, vol./is. 55/6(780-1), 0020-1324;0020-1324 (2010 Jun)

Author(s): Enright PL

Language: English

Country of Publication: United States

Publication Type: Comment; Editorial

Subject Headings:
*Allied Health Personnel/ed [Education]
*Certification
Education, Continuing
Forced Expiratory Volume
Humans
Internet
*Primary Health Care
Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Respiratory Therapy/ed [Education]
*Spirometry

Source: MEDLINE

3. [Examination of spirometry techniques on instruction by medical technologists for screening purposes].

Citation: Rinsho Byori - Japanese Journal of Clinical Pathology, April 2010, vol./is. 58/4(337-42), 0047-1860;0047-1860 (2010 Apr)

Author(s): Ohisa N; Ogawa H; Nagao A; Murayama N; Yoshida K

Institution: Department of Clinical Laboratory, Tohoku University Hospital, Sendai 980-8574, Japan. bigkyu-thk@umin.ac.jp

Language: Japanese

Abstract: BACKGROUND: The burden of chronic obstructive pulmonary disease (COPD) remains very high. Current consensus guidelines emphasize the importance of the early detection of COPD, but its underdiagnosis is common in general practice. Spirometry is the "gold standard" in the diagnosis of COPD. However, it remains underused in general practice because the application of spirometry is viewed as difficult to obtain accurate results. AIMS: To clarify the accuracy of spirometry techniques for screening purposes.

METHOD: Subjects (n = 142) were told about the spirometry procedure using pre-determined descriptions, followed by the first spirometry test. Special medical technologists gave instructions on the detailed spirometry procedure on reference to the first test of results, and the second spirometry test was performed. The second spirometric indices, SVC, FVC, FEV1, FEV1%, and PEF, were compared with the first ones. RESULTS: The instruction by special medical technologists significantly improved all spirometric indices except for FEV1%. For a diagnosis of restrictive disorder (VC<80%), the impact of intervention by the special medical technologists was highly significant (p<0.001). In contrast, for the diagnosis of obstructive disorder (FEV1%<70%), the impact was small. CONCLUSION: To detect obstructive disorder, the high-level accuracy of special spirometry techniques is not always necessary.

Country of Publication: Japan

Publication Type: English Abstract; Journal Article

Subject Headings:
Adult
Aged
Aged, 80 and over
*Allied Health Personnel
Female
Humans
Male
Maximal Expiratory Flow Rate
Middle Aged
*Observer Variation
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Spirometry/mt [Methods]
*Technology, Medical
Vital Capacity
Young Adult

Source: MEDLINE

4. Do spirometry and regular follow-up improve health outcomes in general practice patients with asthma or COPD? A cluster randomised controlled trial

Citation: Medical Journal of Australia, 2010, vol./is. 193/2(104-109), 0025-729X (Jul 19 2010)

Author(s): Abramson, Michael J; Schattner, Rosa L; Sulaiman, Nabil D; Birch, Kate E; Simpson, Pam P

Abstract: Record in progress

Publication Type: Article

Subject Headings:
GENERAL PRACTICE
HEALTH OUTCOMES
PATIENT OUTCOME
ASTHMA
QUALITY OF LIFE
MEDICAL AFTER CARE
RANDOMISED CONTROLLED TRIALS
AUSTRALIA
STATISTICAL DATA
TABULAR DATA

Source: HMIC

5. Assessment of psychosocial problems in primary care COPD patients

Citation: British Journal of Nursing, 2010, vol./is. 19/9(554-557), 0966-0461 (May 13 2010)

Author(s): Upton, Jane; Madoc Sutton, Hazel; Loveridge, Christine; Sheikh, Aziz; Walker, Samantha

Abstract: The emphasis placed on assessing psychosocial needs in nurse-led practice based consultations for chronic obstructive pulmonary disease (COPD) has not been reported.

The authors investigated the frequency with which nurses performed a range of tasks, and explored if the types of tasks performed were related to levels of training or the setting of clinical consultations. Participants were lead COPD nurses based at 500 randomly selected UK general practices. Respondents completed a questionnaire between February and June 2006. The frequency with which key task [sic] were performed - never, sometimes, often or always - was recorded. Follow-up consultations were conducted by 349 of the 368 nurses who responded (74% response rate). Of these, 51% (95% confidence interval (CI): 45 to 56%) reported often or always assessing psychosocial needs, in comparison to 98% (97-99%) who reported often or always checking inhaler technique and 86% (82-89%) who often or always recorded spirometry values. Frequent assessment of psychosocial needs was associated with postregistration COPD education and consultations taking place in designated respiratory clinics. Nurses focus on objective tasks, possibly to the detriment of assessing psychosocial needs. To raise the profile of these aspects of care: updates of the COPD section of the GMS contract should encompass the assessment of patient's [sic] psychosocial status and potential impact of this on quality of life; and appropriate education should be provided. Cites numerous references. [Journal abstract]

Publication Type: Article

Subject Headings:
PSYCHOSOCIAL NEEDS
PSYCHOLOGICAL ASSESSMENT
DEPRESSION
NURSING

Source: HMIC

Full Text: Available in *fulltext* at *EBSCO Host*

6. Primary prevention of chronic obstructive pulmonary disease in primary care.

Citation: Proceedings of the American Thoracic Society, December 2009, vol./is. 6/8(704-6), 1546-3222;1943-5665 (2009 Dec)

Author(s): van der Molen T; Schokker S

Institution: Department of General Practice, University Medical Center Groningen, A. Deusinglaan 1, 9713 AV Groningen, The Netherlands. t.van.der.molen@med.umcg.nl

Language: English

Abstract: Chronic obstructive pulmonary disease (COPD) is a prevalent disease, with cigarette smoking being the main risk factor. Prevention is crucial in the fight against COPD. Whereas primary prevention is targeted on whole populations, patient populations are the focus of primary care; therefore, prevention in this setting is mainly aimed at preventing further deterioration of the disease in patients who present with the first signs of disease (secondary prevention). Prevention of COPD in primary care requires detection of COPD at an early stage. An accurate definition of COPD is crucial in this identification process. The benefits of detecting new patients with COPD should be determined before recommending screening and case-finding programs in primary care. No evidence is available that screening by spirometry results in significant health gains. Effective treatment options in patients with mild disease are lacking. Smoking cessation is the cornerstone of COPD prevention. Because cigarette smoking is not only a major cause of COPD but is also a major cause of many other diseases, a decline in tobacco smoking would result in substantial health benefits.

Country of Publication: United States

Publication Type: Journal Article; Review

Subject Headings:
Adult
Aged
Humans
Middle Aged
*Primary Health Care/mt [Methods]
*Pulmonary Disease, Chronic Obstructive/pc [Prevention & Control]
Smoking Cessation

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*

7. Spirometry in primary care.

Citation: Primary Care Respiratory Journal, December 2009, vol./is. 18/4(239-40), 1471-4418;1475-1534 (2009 Dec)

Author(s): Miller MR

Language: English

Country of Publication: England

Publication Type: Comment; Editorial

Subject Headings:
Humans
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/pp [Physiopathology]
Spirometry/is [Instrumentation]
*Spirometry/st [Standards]

Source: MEDLINE

8. Spirometry in primary care case-identification, diagnosis and management of COPD.

Citation: Primary Care Respiratory Journal, September 2009, vol./is. 18/3(216-23), 1471-4418;1475-1534 (2009 Sep)

Author(s): Price D; Crockett A; Arne M; Garbe B; Jones RC; Kaplan A; Langhammer A; Williams S; Yawn BP

Institution: Centre for Academic Primary Care, University of Aberdeen, Scotland, UK. respiratoryresearch@gmail.com

Language: English

Abstract: Chronic obstructive pulmonary disease (COPD) is an important cause of morbidity and mortality worldwide, yet it remains significantly under-diagnosed. Systematic and opportunistic case-identification efforts in primary care, using questionnaires, careful assessment to identify symptoms, and follow-up spirometry, might improve diagnosis rates and enable earlier detection and management of COPD. The aims of spirometry performed for case-identification purposes are to exclude those patients with symptoms but normal lung function and identify those who require more complete investigation for COPD, including 'diagnostic standard' spirometry. Among patients with a confirmed diagnosis of COPD, spirometry monitoring is useful in identifying those with rapid deterioration in lung function who require further assessment. Spirometry in primary care can also support patient education and may encourage smoking cessation and treatment adherence.

Country of Publication: England

Publication Type: Journal Article

Subject Headings:
Adult
Aged
*Disease Management
Humans
Medication Adherence
Middle Aged
Physician-Patient Relations
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Pulmonary Disease, Chronic Obstructive/th [Therapy]
Smoking Cessation
*Spirometry

Source: MEDLINE

9. Diagnostic assessments of spirometry and medical history data by respiratory specialists supporting primary care: are they reliable?.

Citation: Primary Care Respiratory Journal, September 2009, vol./is. 18/3(177-84), 1471-4418;1475-1534 (2009 Sep)

Author(s): Lucas AE; Smeenk FJ; van den Borne BE; Smeele IJ; van Schayck CP

Institution: Department of General Practice, Research Institute Caphri, Maastricht University, Maastricht, The Netherlands.

Language: English

Abstract: AIM: To determine the intra- and inter-observer reliability of respiratory specialists' diagnostic assessments of spirometry and written medical history data obtained from primary care. METHOD: Five respiratory specialists assessed spirometry data and the history of 156 patients randomly selected from referrals to an asthma/COPD-service. The inter-observer reliability was evaluated. After six months, all specialists repeated the assessments and the intraobserver reliability was evaluated. RESULTS: The diagnostic assessments for all patients had reasonable intra- and inter-observer reliability, resulting in a Cohen's kappa (kappa) of 0.67 and 0.66 respectively. The intra-observer reliability for assessing the need for additional diagnostic examinations had an average kappa 0.56 for new patients and an average kappa 0.39 for follow-up examinations. The assessments of clinical stability in follow-up patients--on which therapeutic advice was based--were inconsistent. CONCLUSION: GPs who are reluctant to perform or interpret spirometry themselves may be supported diagnostically by respiratory specialists in an asthma/COPD-service. The reliability of this advice varies. More appropriate criteria for assessing clinical stability in patients with asthma and COPD are necessary to improve the reliability of the therapeutic advice.

Country of Publication: England

Publication Type: Evaluation Studies; Journal Article; Research Support, Non-U.S. Gov't

Subject Headings:
Adolescent
Adult
Aged
Aged, 80 and over
*Asthma/di [Diagnosis]
Female
Humans
Male
Medical Audit
*Medical Records
Middle Aged
Observer Variation
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Pulmonary Medicine
Referral and Consultation
Severity of Illness Index
*Spirometry
Young Adult

Source: MEDLINE

10. Remote daily real-time monitoring in patients with COPD --a feasibility study using a novel device.

Citation: Respiratory Medicine, September 2009, vol./is. 103/9(1320-8), 0954-6111;1532-3064 (2009 Sep)

Author(s): Sund ZM; Powell T; Greenwood R; Jarad NA

Institution: Department Respiratory Medicine, Bristol Royal Infirmary, Marlborough Street, Bristol, UK.

Language: English

Abstract: New technologies have allowed remote real-time electronic recording of symptoms and spirometry. The feasibility of utilising this technology in COPD patients has not been investigated. This is a feasibility study. The primary objective is to determine whether the use of an electronic diary with a portable spirometer can be performed by COPD patients with a moderate to severe disease. Secondary objectives are to investigate the value of this method in early detection of acute exacerbations of COPD (AECOPD). In this 6-month study, 18 patients recorded daily their symptom score and spirometry. Data was sent on real time. AECOPD which was defined according to pre-set criteria were noted. Spirometry values and scores for health-related quality of life were compared between the start and the end of the study. Hospitalisation rate due to AECOPD was compared with a parallel period in the previous year. On average, patients were able to record 77% of their total study days. The system detected 73% of AECOPD. In further 27% of AECOPD patients sought treatment although the change in symptoms did not meet AECOPD definition. The number of COPD-related hospitalisations significantly reduced compared to the previous year. There was a significant increase in FEV(1) and FVC from the start to the end of the study. The remote monitoring device used in this study can be used in COPD patients. AECOPD was detected early in the majority of cases. Hospitalisation rate due to AECOPD was reduced and FEV(1) and FVC values increased during the study.

Country of Publication: England

Publication Type: Evaluation Studies; Journal Article; Research Support, Non-U.S. Gov't

Subject Headings:
Aged
Feasibility Studies
Female
Forced Expiratory Volume/ph [Physiology]
Hospitalization
Humans
Male
*Monitoring, Ambulatory/is [Instrumentation]
*Pulmonary Disease, Chronic Obstructive/pp [Physiopathology]
Quality of Life
Reproducibility of Results
Severity of Illness Index
*Spirometry/is [Instrumentation]

Source: MEDLINE

11. Screening for and early detection of chronic obstructive pulmonary disease.

Citation: Lancet, August 2009, vol./is. 374/9691(721-32), 0140-6736;1474-547X (2009 Aug 29)

Author(s): Soriano JB; Zielinski J; Price D

Institution: CIMERA (International Center for Advanced Respiratory Medicine), Recinte Hospital Joan March, Bunyola, Spain. jbsoriano@caubet-cimera.es

Language: English

Abstract: Chronic obstructive pulmonary disease (COPD) is a substantially underdiagnosed disorder, with the diagnosis typically missed or delayed until the condition is advanced. Spirometry is the most frequently used pulmonary function test and enables health professionals to make an objective measurement of airflow obstruction and assess the degree to which it is reversible. As a diagnostic test for COPD, spirometry is a reliable, simple, non-invasive, safe, and non-expensive procedure. Early diagnosis of COPD should provide support for smoking cessation initiatives and lead to reduction of the societal burden of the disease, but definitive confirmation of both proves elusive. Despite substantial effort and investment, implementation of quality spirometry is deficient because of several hurdles and limitations, described in this Review. All in all, spirometry is recognised as the essential test for diagnosis and monitoring of COPD.

Country of Publication: England

Publication Type: Journal Article; Review

Subject Headings:
Algorithms
Cost of Illness
Diagnostic Errors/pc [Prevention & Control]
Early Diagnosis
Finland/ep [Epidemiology]
Forced Expiratory Volume
Great Britain/ep [Epidemiology]
Humans
*Mass Screening/mt [Methods]
Poland/ep [Epidemiology]
Population Surveillance
Prevalence
Primary Prevention
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/ep [Epidemiology]
Pulmonary Disease, Chronic Obstructive/pc [Prevention & Control]
Risk Factors
Risk Reduction Behavior
Secondary Prevention
Severity of Illness Index
Smoking Cessation
*Spirometry/mt [Methods]
Tertiary Prevention
Vital Capacity
World Health

Source: MEDLINE

Full Text: Available in *fulltext* at *ProQuest*
Available in *print* at *Bolton PCT*

12. COPD case finding by spirometry in high-risk customers of urban community pharmacies: a pilot study.

Citation: Respiratory Medicine, June 2009, vol./is. 103/6(839-45), 0954-6111;1532-3064 (2009 Jun)

Author(s): Castillo D; Guayta R; Giner J; Burgos F; Capdevila C; Soriano JB; Barau M; Casan P; FARMAEPOC group

Institution: Department of Respiratory Medicine, Hospital del Mar, Institut Municipal d'Investigació Mèdica (IMIM), Barcelona, Spain. d.castillo@diurba.com

Language: English

Abstract: BACKGROUND: COPD case finding is currently recommended at primary and tertiary care levels only. AIM: To evaluate the feasibility of a community pharmacy program for COPD case finding in high-risk customers by means of spirometry. METHODS: Pilot cross-sectional descriptive study in 13 urban community pharmacies in Barcelona, Spain, from April to May 2007. Customers >40 years old with respiratory symptoms and/or a history of smoking were invited to participate in the study during pharmacists' routine work shifts. High-risk customers were identified by means of a 5-item COPD screening questionnaire based on criteria of the Global Initiative for Chronic Obstructive Lung Disease, and were invited to perform spirometry accordingly. Those with an FEV(1)/FVC ratio less than 0.70 were referred to the hospital for a repeat spirometry. RESULTS: Of the 161 pharmacy customers studied, 100 (62%) scored 3 or more items in the COPD screening questionnaire, and after spirometry, 21 (24%) had an FEV(1)/FVC ratio<0.7. When these subjects with airflow limitation were offered referral to a hospital respiratory function laboratory for further assessments, 11 (52%) attended the appointment. Over 70% of spirometries were rated as being of acceptable quality. No significant differences were observed in lung function parameters between the pharmacy and hospital

measurements. CONCLUSIONS: COPD case finding by spirometry in high-risk customers of urban community pharmacies is feasible. Similarly to primary care practitioners, pharmacists have access to high-risk, middle-aged subjects who have never been tested for COPD. Pharmacists can help with early detection of COPD if they are correctly trained.

Country of Publication: England

Publication Type: Evaluation Studies; Journal Article; Research Support, Non-U.S. Gov't

Subject Headings:
Adult
Aged
Cross-Sectional Studies
Early Diagnosis
Feasibility Studies
Female
Forced Expiratory Volume/ph [Physiology]
Humans
Male
*Mass Screening/mt [Methods]
Middle Aged
*Pharmacies
Pilot Projects
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/pp [Physiopathology]
Smoking/ae [Adverse Effects]
Spain
*Spirometry/mt [Methods]
Urban Health

Source: MEDLINE

13. Spirometry utilization after hospitalization for patients with chronic obstructive pulmonary disease exacerbations.

Citation: American Journal of Medical Quality, January 2009, vol./is. 24/1(61-6), 1062-8606;1062-8606 (2009 Jan-Feb)

Author(s): Volkova NB; Kodani A; Hilario D; Munyaradzi SM; Peterson MW

Institution: Department of Hospital Medicine, Kaiser Permanente Medical Group, Inc., Fresno, CA 93720, USA. natutie@lycos.com

Language: English

Abstract: Chronic obstructive pulmonary disease (COPD) is a leading cause of morbidity and mortality in the US population. An area of improvement hinges on early detection and proper monitoring. Spirometry is an important interventional tool; its underuse among hospitalized patients with COPD could affect quality of care. This study evaluates spirometry use at the Community Medical Center-Sierra in hospitalized patients with COPD. A retrospective medical record review from January 1, 2000, to March 15, 2002, assesses 1507 inpatients with COPD. The effects are analyzed of age, sex, race/ethnicity, diagnosis, insurance status, disposition, and admitting service on spirometry use by physicians are analyzed. A questionnaire is used to evaluate the knowledge, attitudes, and behaviors of residents toward spirometry ordering. Baseline characteristics are similar between study groups. Only 3% of 1476 study patients have spirometry performed within the recommended time frame, and only 12.2% have at least 1 spirometry performed. Patients having a primary diagnosis of COPD have a greater likelihood of having spirometry performed (20.3% vs 11.1%, P < .001), as do patients who are discharged to home (13.4% vs 5.9%, P = .001). No significant effects are noted for sex, race/ethnicity, insurance status, or admitting service. The house staff surveys reveal that most do not know the indications for (72.0%) or how to order (46.0%) spirometry. Spirometry is underused among physicians who treat hospitalized patients with COPD. Future educational efforts aimed at improving physicians' ordering and use of spirometry are needed to address this disparity.

Country of Publication: United States

Publication Type: Journal Article

Subject Headings:
Female
Humans
Male
Middle Aged
*Outpatients
*Pulmonary Disease, Chronic Obstructive/co [Complications]
Questionnaires
Retrospective Studies
*Spirometry
United States

Source: MEDLINE

14. edictive value of primary care made clinical diagnosis of chronic obstructive pulmonary disease (COPD) with secondary care specialist diagnosis based on spirometry performed in a lung function laboratory.

Citation: Primary Health Care Research and Development, 2009, vol./is. 10/1(49-53), 6342-36 (January 2009)

Author(s): berts, C. Michael

Abstract: M: To define the predictive value of clinical diagnosis of chronic obstructive pulmonary disease (COPD) or suspected COPD in primary care patients with spirometric criteria for diagnosis. BACKGROUND: The diagnosis of COPD is usually made clinically but often not confirmed by diagnostic testing. Recent initiatives have called for universal spirometry testing in primary care to diagnose and monitor such patients the implications of this policy on diagnostic accuracy are not as yet known. METHODS: Retrospective comparative analysis of 677 consecutive primary care referrals to a district general hospital lung function laboratory for spirometry, March 1998 to December 2006. FINDINGS: Five hundred and three of 677 patients referred for open access spirometry had a primary care clinical diagnosis or suspected diagnosis of COPD. When compared with NICE spirometric criteria for diagnosis of COPD, 141 patients (28 per cent) had normal spirometry, 46 (nine per cent) had reversible airflow obstruction and 14 (three per cent) a restrictive pattern of spirometry. The positive predictive value of a primary care clinical diagnosis of COPD was 0.62 for patients referred for assessment of severity and 0.56 for those referred for diagnostic testing. Clinical suspicion of COPD in this sample was not confirmed by spirometry in a high proportion of referred patients. The introduction of the widespread use of spirometry for confirmation of primary care clinician made COPD diagnosis have important implications for both individual patients and primary care service planning. 2 tables 14 refs. [Abstract]

Publication Type: Article

Subject Headings:

Source: HMIC

15. Spirometry in primary care.

Citation: Primary Health Care, 01 December 2008, vol./is. 18/10(37-47), 02645033

Language: English

Abstract: An evaluation of lung function is an essential part of the diagnosis and management of respiratory disease but spirometry was, until recently, rarely available in primary care. The emphasis in national chronic obstructive pulmonary disease (COPD) and asthma guidelines on spirometry for diagnosis and monitoring, together with its inclusion in the quality and outcomes framework (QOF) for COPD in the General Medical Services contract, has led to its wider availability in this setting. Spirometry is a relatively easy test, but is unreliable and confusing if not performed and interpreted correctly.

Publication Type: journal article

Subject Headings: Primary Health Care

Respiratory Function Tests
Spirometry
Infection Control
Patient Positioning
Spirometry
Spirometry
Spirometry

Source: CINAHL

Full Text: Available in *fulltext* at *EBSCO Host*
Available in *print* at *Bolton PCT*

16. The use and abuse of office spirometry.

Citation: Primary Care Respiratory Journal, December 2008, vol./is. 17/4(238-42), 1471-4418;1471-4418 (2008 Dec)

Author(s): Enright P

Institution: The University of Arizona, Tucson, Arizona, USA. Lungguy@aol.com

Language: English

Abstract: Spirometry programs (outside of primary care settings) designed to detect COPD in the general adult population are not justified, since the true positive yield (airway obstruction with an FEV1 below 60% predicted) is very low, and the false positive rate is very high. However, spirometry is greatly under-utilised by GPs who often prescribe inhalers for patients haphazardly. Inhalers for COPD are expensive and risk serious side-effects, so they should not be prescribed for current or former smokers without confirming severe airway obstruction. A large program in Finland has shown that some GPs can perform good quality spirometry. If good quality spirometry is not available in the GP's office, patients should be referred to a local resource for pre- and post-bronchodilator spirometry. More studies are needed to show that GPs use spirometry results systematically to make decisions which truly benefit their patients with asthma or COPD.

Country of Publication: Netherlands

Publication Type: Journal Article; Review

Subject Headings: Asthma/di [Diagnosis]
Asthma/th [Therapy]
*Health Services Misuse
Humans
*Office Visits
Physician's Practice Patterns
*Primary Health Care
Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/th [Therapy]
*Spirometry/ut [Utilization]

Source: MEDLINE

17. The use of microspirometry in detecting lowered FEV1 values in current or former cigarette smokers.

Citation: Primary Care Respiratory Journal, December 2008, vol./is. 17/4(232-7), 1471-4418;1471-4418 (2008 Dec)

Author(s): Rytila P; Helin T; Kinnula V

Institution: Division of Allergology, Helsinki University Central Hospital, Helsinki, Finland.

Language: English

Abstract: AIMS: COPD is an underdiagnosed disease. This study was undertaken to assess the value of microspirometry in detecting reduced FEV1 values in cigarette smokers, i.e., subjects at high risk for COPD. METHODS: A total of 611 smokers or ex-smokers with a smoking history >20 years and no previously-diagnosed lung disease were recruited (389

male, age 27-83 years, mean age 56 years, mean smoking history 35 pack years, 19% ex-smokers). RESULTS: An FEV1 < 80% predicted on microspirometry was found in 44.6% of cases. The mean FEV1 was 2.8 litres (80.6% predicted, range 26-121%). This correlated well with values obtained from full spirometry (R=0.965, p<0.0001). Detailed questionnaire responses revealed that almost half of the subjects (48.2%) reported chronic cough and sputum production and 39.8% reported breathlessness during exercise. CONCLUSIONS: Microspirometry finds a considerable number of smokers or ex-smokers with reduced FEV1 values. Microspirometry is quick to perform. All smokers with reduced microspirometry FEV1 values would benefit from smoking cessation, and all patients with reduced FEV1 values need to be considered for full spirometry to confirm if they actually have COPD.

Country of Publication: Netherlands

Publication Type: Controlled Clinical Trial; Journal Article; Multicenter Study; Research Support, Non-U.S. Gov't

Subject Headings:
Adult
Aged
Aged, 80 and over
Cross-Sectional Studies
Female
Finland
*Forced Expiratory Volume/ph [Physiology]
Humans
Male
Mass Screening/mt [Methods]
Middle Aged
Pilot Projects
Predictive Value of Tests
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/et [Etiology]
Pulmonary Disease, Chronic Obstructive/pp [Physiopathology]
Reproducibility of Results
Risk Factors
Smoking/ae [Adverse Effects]
*Smoking/pp [Physiopathology]
*Spirometry/mt [Methods]

Source: MEDLINE

18. Management of chronic obstructive pulmonary disease (COPD) in primary care: a questionnaire survey in western Sweden.

Citation: Primary Care Respiratory Journal, March 2008, vol./is. 17/1(26-31), 1471-4418;1471-4418 (2008 Mar)

Author(s): Thorn J; Norrhall M; Larsson R; Curiac D; Axelsson G; Ammon C; Månsson J; Brisman J; Söderström AL; Björkelund C

Institution: Department of Public Health and Community Medicine/Primary Health Care, The Sahlgrenska Academy at Göteborg University, Sweden. jorgen.thorn@allmed.gu.se

Language: English

Abstract: AIM: To assess the primary care management of chronic obstructive pulmonary disease (COPD) in relation to COPD guidelines. METHOD: A postal questionnaire was sent out to all Primary Health Care Centres (PHCCs) in western Sweden (n=232). The response rate was 75%. RESULTS: A majority of the PHCCs had a nurse and physician responsible for COPD care. They used spirometry equipment regularly, but only 50% reported that they calibrated it at least weekly. Less than 30% of the PHCCs reported access to a dietician, occupational therapist or physiotherapist. There was a structured smoking cessation program in 50% of the PHCCs. Larger PHCCs were more likely to use

spirometry equipment regularly and to have specific personnel for COPD care. CONCLUSION: There is a need to establish structured programs for COPD care including smoking cessation programs for COPD patients with special trained staff. Larger PHCCs have a better infrastructure for providing guideline-defined COPD care.

Country of Publication: Netherlands

Publication Type: Journal Article; Research Support, Non-U.S. Gov't

Subject Headings:
Calibration
Guideline Adherence/sn [Statistics & Numerical Data]
Health Services Accessibility
Humans
*Primary Health Care/og [Organization & Administration]
Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/nu [Nursing]
*Pulmonary Disease, Chronic Obstructive/th [Therapy]
Questionnaires
Risk Factors
Smoking Cessation
Spirometry/st [Standards]
*Spirometry/ut [Utilization]
Sweden

Source: MEDLINE

19. Primary care spirometry.

Citation: European Respiratory Journal, January 2008, vol./is. 31/1(197-203), 0903-1936;1399-3003 (2008 Jan)

Author(s): Derom E; van Weel C; Liistro G; Buffels J; Schermer T; Lammers E; Wouters E; Decramer M

Institution: Dept of Respiratory Diseases, Ghent University Hospital, De Pintelaan 185, B-9000 Ghent, Belgium. eric.derom@Ugent.be

Language: English

Abstract: Primary care spirometry is a uniquely valuable tool in the evaluation of patients with respiratory symptoms, allowing the general practitioner to diagnose or exclude chronic obstructive pulmonary disease (COPD), sometimes to confirm asthma, to determine the efficacy of asthma treatment and to correctly stage patients with COPD. The use of spirometry for case finding in asymptomatic COPD patients might become an option, once early intervention studies have shown it to be beneficial in these patients. The diagnosis of airway obstruction requires accurate and reproducible spirometric measurements, which should comply with the American Thoracic Society (ATS)/European Respiratory Society (ERS) guidelines. Low acceptability of spirometric manoeuvres has been reported in primary care practices. This may hamper the validity of the results and affect clinical decision making. Training and refresher courses may produce and maintain good-quality testing, promote the use of spirometric results in clinical practice and enhance the quality of interpretation. Softening the stringent ATS/ERS criteria could enhance the acceptability rates of spirometry when used in a general practice. However, the implications of potential simplifications on the quality of the data and clinical decision making remain to be investigated. Hand-held office spirometers have been developed in recent years, with a global quality and user-friendliness that makes them acceptable for use in general practices. The precision of the forced vital capacity measurements could be improved in some of the available models.

Country of Publication: Switzerland

Publication Type: Journal Article; Review

Subject Headings:
Clinical Trials as Topic
Equipment Design
Forced Expiratory Volume

Heart Diseases/di [Diagnosis]
Heart Diseases/ep [Epidemiology]
Humans
Lung Diseases/di [Diagnosis]
Lung Diseases/ep [Epidemiology]
*Primary Health Care/mt [Methods]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Pulmonary Disease, Chronic Obstructive/pa [Pathology]
*Pulmonary Medicine/is [Instrumentation]
*Pulmonary Medicine/mt [Methods]
Quality Assurance, Health Care
Software
Spirometry/is [Instrumentation]
*Spirometry/mt [Methods]
Vital Capacity

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*

20. Fulfilling the promise of primary care spirometry.

Citation: European Respiratory Journal, January 2008, vol./is. 31/1(8-10), 0903-1936;1399-3003 (2008 Jan)

Author(s): Calverley P

Language: English

Country of Publication: Switzerland

Publication Type: Comment; Congresses; Editorial

Subject Headings: Asthma/di [Diagnosis]
Asthma/th [Therapy]
Europe
Humans
Lung Diseases/di [Diagnosis]
*Lung Diseases/th [Therapy]
*Primary Health Care/mt [Methods]
Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/th [Therapy]
*Pulmonary Medicine/mt [Methods]
Quality of Health Care/st [Standards]
*Spirometry/mt [Methods]

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*

21. COPD: your role in early detection.

Citation: Nurse Practitioner, November 2007, vol./is. 32/11(24-33; quiz 33-4), 0361-1817;0361-1817 (2007 Nov)

Author(s): Bruce ML; McEvoy P

Institution: Charlotte Hungerford Hospital, Torrington, Conn., USA.

Language: English

Country of Publication: United States

CAS Registry Number: 0 (Adrenergic beta-Agonists); 0 (Anti-Inflammatory Agents); 0 (Bronchodilator Agents); 0 (Cholinergic Antagonists)

Publication Type: Journal Article; Review

Subject Headings: Adrenergic beta-Agonists/tu [Therapeutic Use]
Anti-Inflammatory Agents/tu [Therapeutic Use]

Bronchitis/et [Etiology]
Bronchodilator Agents/tu [Therapeutic Use]
Cholinergic Antagonists/tu [Therapeutic Use]
Disease Progression
Early Diagnosis
Forced Expiratory Volume
Humans
*Nurse Practitioners/og [Organization & Administration]
*Nurse's Role
Nursing Assessment
Oxygen Inhalation Therapy
Patient Admission
Patient Education as Topic
Patient Selection
Practice Guidelines as Topic
*Primary Health Care/og [Organization & Administration]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/ep [Epidemiology]
Pulmonary Disease, Chronic Obstructive/et [Etiology]
*Pulmonary Disease, Chronic Obstructive/th [Therapy]
Risk Factors
Severity of Illness Index
Spirometry
Vital Capacity

Source: MEDLINE

22. Spirometry Can Be Done in Family Physicians' Offices and Alters Clinical Decisions in Management of Asthma and COPD.

Citation: CHEST, 01 October 2007, vol./is. 132/4(1162-1168), 00123692

Author(s): Yawn BP; Enright PL; Lemanske RF Jr; Israel E; Pace W; Wollan P; Boushey H

Language: English

Abstract: BACKGROUND: Spirometry is recommended for diagnosis and management of obstructive lung disease. While many patients with asthma and COPD are cared for by primary care practices, limited data are available on the use and results associated with spirometry in primary care. Object: To assess the technical adequacy, accuracy of interpretation, and impact of office spirometry. DESIGN: A before-and-after quasiexperimental design. SETTING: Three hundred eighty-two patients from 12 family medicine practices across the United States. PARTICIPANTS: Patients with asthma and COPD, and staff from the 12 practices. MEASUREMENTS: Technical adequacy of spirometry results, concordance between family physician and pulmonary expert interpretations of spirometry test results, and changes in asthma and COPD management following spirometry testing. RESULTS: Of the 368 tests completed over the 6 months, 71% were technically adequate for interpretation. Family physician and pulmonary expert interpretations were concordant in 76% of completed tests. Spirometry was followed by changes in management in 48% of subjects with completed tests, including 107 medication changes (>85% concordant with guideline recommendations) and 102 nonpharmacologic changes. Concordance between family physician and expert interpretations of spirometry results was higher in those patients with asthma compared to those with COPD. Discussion and conclusions: US family physicians can perform and interpret spirometry for asthma and COPD patients at rates comparable to those published in the literature for international primary care studies, and the spirometry results modify care.

Publication Type: journal article

Subject Headings: Asthma
Family Practice
Pulmonary Disease, Chronic Obstructive
Practice Patterns

Spirometry
Adolescence
Adult
Aged
Aged, 80 and Over
Child
Disease Management
Female
Male
Middle Age
Primary Health Care

Source: CINAHL

Full Text: Available in *fulltext* at *Highwire Press*

23. [Comments on screening spirometry for detection of COPD]. [Dutch] Kanttekeningen bij screenend longfunctieonderzoek voor detectie van COPD.

Original Title: Kanttekeningen bij screenend longfunctieonderzoek voor detectie van COPD.

Citation: Nederlands Tijdschrift voor Geneeskunde, July 2007, vol./is. 151/28(1557-60), 0028-2162;0028-2162 (2007 Jul 14)

Author(s): van den Berg JW; van der Molen T; Kerstjens HA; Quanjer PH

Institution: Isala klinieken, afd. Longziekten, Postbus 10.500, 8000 GM Zwolle. j.w.k.van.den.berg@isala.nl

Language: Dutch

Abstract: World COPD day is an annual event intended to increase awareness of chronic obstructive pulmonary disease. During this day, in November 2006, free spirometry testing was offered to the public in approximately 100 places including hospitals, pharmacies, offices of GPs and tents on main squares throughout the Netherlands. The objective of this action is laudable. However, screening for COPD is generally considered ineffective. Furthermore, the application of a fixed ratio of forced expiratory volume in one second (FEV1) to forced vital capacity (FVC) (FEV1/FVC < 0.70) as recommended by the Global Initiative for Chronic Obstructive Lung Disease (GOLD) to detect airflow limitation, required for a diagnosis of COPD, may lead to underdiagnosis of COPD in the young and to overdiagnosis in the elderly. In addition, spirometry was generally performed without bronchodilation, thus further increasing the likelihood of a false-positive diagnosis ofCOPD. Smoking cessation is important in halting the progression of COPD. Therefore, identifying smokers at risk for developing COPD seems a logical reason for screening or case finding for COPD. However, it has not been clearly demonstrated that early detection of COPD may contribute to improved smoking cessation rates. Also, smokers with normal spirometry may be led to believe that smoking has no adverse effects on their health. Therefore, a different strategy should be adopted to increase awareness of COPD on the next World COPD day.

Country of Publication: Netherlands

Publication Type: English Abstract; Journal Article

Subject Headings:
Awareness
False Positive Reactions
Forced Expiratory Volume
Humans
Mass Screening
Netherlands
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/pc [Prevention & Control]
Risk Factors
Smoking/ae [Adverse Effects]
*Smoking Cessation

*Spirometry/mt [Methods]
Vital Capacity

Source: MEDLINE

24. Effect of spirometry on COPD management in primary care: where are the studies that we really need?.

Citation: European Respiratory Journal, April 2007, vol./is. 29/4(820; author reply 821), 0903-1936;0903-1936 (2007 Apr)

Author(s): Poels PJ; Schellekens DP; Schermer TR

Language: English

Country of Publication: Switzerland

CAS Registry Number: 0 (Bronchodilator Agents)

Publication Type: Comment; Letter

Subject Headings: *Bronchodilator Agents/du [Diagnostic Use]
Clinical Trials as Topic
*Diagnostic Errors/pc [Prevention & Control]
Guidelines as Topic
Humans
*Primary Health Care/mt [Methods]
Primary Health Care/sn [Statistics & Numerical Data]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Pulmonary Disease, Chronic Obstructive/th [Therapy]
*Spirometry/mt [Methods]

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*

25. Efficacy of confrontational counselling for smoking cessation in smokers with previously undiagnosed mild to moderate airflow limitation: study protocol of a randomized controlled trial.

Citation: BMC Public Health, 2007, vol./is. 7/(332), 1471-2458;1471-2458 (2007)

Author(s): Kotz D; Wesseling G; Huibers MJ; van Schayck OC

Institution: Department of General Practice, School for Public Health and Primary Care (CAPHRI), Maastricht University, Maastricht, The Netherlands. d.kotz@hag.unimaas.nl

Language: English

Abstract: BACKGROUND: The use of spirometry for early detection of chronic obstructive pulmonary disease (COPD) is still an issue of debate, particularly because of a lack of convincing evidence that spirometry has an added positive effect on smoking cessation. We hypothesise that early detection of COPD and confrontation with spirometry for smoking cessation may be effective when applying an approach we have termed "confrontational counselling"; a patient-centred approach which involves specific communication skills and elements of cognitive therapy. An important aspect is to confront the smoker with his/her airflow limitation during the counselling sessions. The primary objective of this study is to test the efficacy of confrontational counselling in comparison to regular health education and promotion for smoking cessation delivered by specialized respiratory nurses in current smokers with previously undiagnosed mild to moderate airflow limitation. METHODS/DESIGN: The study design is a randomized controlled trial comparing confrontational counselling delivered by a respiratory nurse combined with nortriptyline for smoking cessation (experimental group), health education and promotion delivered by a respiratory nurse combined with nortriptyline for smoking cessation (control group 1), and "care as usual" delivered by the GP (control group 2). Early detection of smokers with mild to moderate airflow limitation is achieved by means of a telephone interview in combination with spirometry. Due to a comparable baseline risk of airflow limitation and motivation to quit smoking, and because of the standardization of number, duration, and scheduling of counselling sessions between the experimental group and control group 1, the study enables to assess the "net" effect of

confrontational counselling. The study has been ethically approved and registered. DISCUSSION: Ethical as well as methodological considerations of the study are discussed in this protocol. A significant and relevant effect of confrontational counselling would provide an argument in favour of early detection of current smokers with airflow limitation. Successful treatment of tobacco dependence in respiratory patients requires repeated intensive interventions. The results of this study may also show that respiratory nurses are able to deliver this treatment and that intensive smoking cessation counselling is more feasible. TRIAL REGISTRATION:: Netherlands Trial Register (ISRCTN 64481813).

Country of Publication: England

CAS Registry Number: 0 (Adrenergic Uptake Inhibitors); 72-69-5 (Nortriptyline)

Publication Type: Comparative Study; Journal Article; Randomized Controlled Trial; Research Support, Non-U.S. Gov't

Subject Headings:
*Adrenergic Uptake Inhibitors/tu [Therapeutic Use]
Combined Modality Therapy
*Counseling/mt [Methods]
Humans
*Nortriptyline/tu [Therapeutic Use]
*Patient Education as Topic
Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Smoking Cessation/mt [Methods]
*Spirometry

Source: MEDLINE

Full Text: Available in *fulltext* at *BioMedCentral*
Available in *fulltext* at *National Library of Medicine*

26. [Spirometry for the primary care physician? For which patient?]. [French] La spirométrie au cabinet du praticien? Pour quel patient?

Original Title: La spirométrie au cabinet du praticien? Pour quel patient?

Citation: Revue Medicale Suisse, November 2006, vol./is. 2/87(2592-4, 2597), 1660-9379;1660-9379 (2006 Nov 15)

Author(s): Jayet PY; Heinzer R; Fitting JW

Institution: Service de pneumologie, CHUV, 1011 Lausanne. pierre-yves.jayet@chuv.ch

Language: French

Abstract: Spirometry is the simplest pulmonary function test and recently became available to all physicians by means of economic and performing devices. Spirometry however requires a good knowledge of indications, realization and interpretation. Expert recommendations, regularly updated by the American and European respiratory societies, specify the necessary conditions for spirometry to provide useful information for the care of patients.

Country of Publication: Switzerland

Publication Type: English Abstract; Journal Article; Review

Subject Headings:
*Asthma/di [Diagnosis]
Feasibility Studies
Forced Expiratory Volume
Humans
Maximal Expiratory Flow-Volume Curves
Practice Guidelines as Topic
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Respiratory Function Tests/mt [Methods]
Spirometry/st [Standards]
*Spirometry

Switzerland
Vital Capacity

Source: MEDLINE

27. Prejudgement towards the quality of spirometry in primary care does not help our case.

Citation: European Respiratory Journal, November 2006, vol./is. 28/5(1067; author reply 1068), 0903-1936;0903-1936 (2006 Nov)

Author(s): Chavannes NH; Schermer TR

Language: English

Country of Publication: Switzerland

Publication Type: Comment; Letter

Subject Headings:
Clinical Competence
False Positive Reactions
Forced Expiratory Volume
Humans
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Spirometry/mt [Methods]
Spirometry/st [Standards]
Spirometry/ut [Utilization]

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*

28. Effect of primary-care spirometry on the diagnosis and management of COPD.

Citation: European Respiratory Journal, November 2006, vol./is. 28/5(945-52), 0903-1936;0903-1936 (2006 Nov)

Author(s): Walker PP; Mitchell P; Diamantea F; Warburton CJ; Davies L

Institution: Division of Infection and Immunity, School of Clinical Sciences, University of Liverpool, Liverpool, UK. ppwalker@liverpool.ac.uk

Language: English

Abstract: Primary-care spirometry has been promoted as a method of facilitating accurate diagnosis of chronic obstructive pulmonary disease (COPD). The present study examined whether improving rates of diagnosis lead to improvements in pharmacological and nonpharmacological management. From 1999 to 2003, the current authors provided an open-access spirometry and reversibility service to a local primary-care area, to which 1,508 subjects were referred. A total of 797 (53%) had pre-bronchodilator airflow obstruction (AFO). Of the subjects who underwent reversibility testing, 19.3% were no longer obstructed post-bronchodilator. The results and records of a subgroup of 235 subjects with post-bronchodilator AFO were examined. Of the 235 subjects, 130 received a new diagnosis, most commonly COPD. The patients with COPD were significantly undertreated before spirometry and testing led to a significant increase in the use of anticholinergics (37 versus 18%), long-acting beta-agonists (25 versus 8%) and inhaled steroids (71 versus 52%). More than three quarters of smokers received smoking cessation advice but very few were referred for pulmonary rehabilitation. In conclusion, primary-care spirometry not only increases rates of chronic obstructive pulmonary disease diagnosis, but it also leads to improvements in chronic obstructive pulmonary disease treatment. The use of bronchodilator reversibility testing in this setting may be important to avoid misdiagnosis.

Country of Publication: Switzerland

CAS Registry Number: 0 (Bronchodilator Agents)

Publication Type: Evaluation Studies; Journal Article

Subject Headings: Adult

Aged
*Bronchodilator Agents/du [Diagnostic Use]
*Diagnostic Errors/pc [Prevention & Control]
Female
Great Britain
Humans
Male
Middle Aged
*Primary Health Care/mt [Methods]
Primary Health Care/sn [Statistics & Numerical Data]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/th [Therapy]
*Spirometry/mt [Methods]

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*

29. Discrepancy in the use of confirmatory tests in patients hospitalized with the diagnosis of chronic obstructive pulmonary disease or congestive heart failure.

Citation: Respiratory Care, 01 October 2006, vol./is. 51/10(1120-1124), 00201324

Author(s): Damarla M; Celli BR; Mullerova HX; Pinto-Plata VM

Language: English

Abstract: OBJECTIVE: To determine the prevalence of confirmatory use of spirometry in patients admitted to a tertiary-care facility with the diagnosis of chronic obstructive pulmonary disease (COPD), including those with respiratory failure, and compare that to the use of confirmatory 2-dimensional echocardiography (2-D echo) in patients admitted with the diagnosis of congestive heart failure (CHF), to determine preferential confirmatory testing practices. SETTING: Academic tertiary-care hospital. METHODS: A 6-month retrospective review of charts of patients with a primary or secondary discharge diagnosis of COPD, respiratory failure, and CHF, using the appropriate International Classification of Diseases, Ninth Revision, Clinical Modification codes. Pulmonary function and echocardiography laboratory databases were reviewed to determine if the patients had had spirometry or 2-D echo performed during the 8 years prior to the study period. RESULTS: Five hundred fifty-three patients were discharged with the diagnosis of COPD, and 173 patients (31%) had had spirometry. In contrast, 789 patients had the diagnosis of CHF, and a larger proportion of them (619 patients, 78%) had had 2-D echo ($p < 0.001$). Only 35% of the patients with respiratory failure and COPD had spirometry performed. There were a total of 219 patients with concomitant diagnoses of COPD and CHF. A majority of them (48%) had a 2-D echo as the only confirmatory test, 74 (34%) had both tests performed, 4 (2%) had spirometry only, and 36 (16%) had neither test performed. Of the patients with a diagnosis of COPD who had spirometry, 30% had spirometry findings consistent with restrictive or normal physiology. CONCLUSIONS: A large proportion of patients hospitalized with the diagnosis of COPD have never had a confirmatory test, including those with presumably advanced disease. Compared to patients with CHF, patients with COPD are less likely to have had the confirmatory test performed, even when both conditions coexist. Many patients with the clinical diagnosis of COPD have an inconsistent physiologic diagnosis. To impact the increasingly important problem of COPD, we must raise awareness of the need to confirm its diagnosis and severity with spirometry.

Publication Type: journal article

Subject Headings: Echocardiography
Pulmonary Disease, Chronic Obstructive
Spirometry
Chi Square Test
Comorbidity
Convenience Sample
Descriptive Research

Descriptive Statistics
Fisher's Exact Test
Heart Failure, Congestive
Inpatients
International Classification of Diseases
Medical Records
Record Review
Retrospective Design
United States
Human

Source: CINAHL

30. The impact of repeated spirometry and smoking cessation advice on smokers with mild COPD.

Citation: Scandinavian Journal of Primary Health Care, 01 September 2006, vol./is. 24/3(133-139), 02813432

Author(s): Stratelis G; Mölstad S; Jakobsson P; Zetterström O

Language: English

Abstract: Background. Smoking cessation is the most important therapeutic intervention in patients with chronic obstructive pulmonary diseases (COPD) and the health benefits are immediate and substantial. Major efforts have been made to develop methods with high smoking cessation rates. Objectives. To study whether a combination of spirometry and brief smoking cessation advice to smokers with COPD, annually for three years, increased their smoking cessation rate in comparison with groups of smokers with normal lung function. Method. Prospective, randomized study in primary care. Smoking cessation rates were compared between smokers with COPD followed-up yearly over a period of three years and smokers with normal lung function followed-up yearly for three years or followed-up only once after three years. Results. The point-prevalence abstinence rate and prolonged abstinence rate at 6 and 12 months increased yearly and in smokers with COPD at year 3 was 29%, 28%, and 25%, respectively. The abstinence rates were significantly higher in smokers with COPD than in smokers with normal lung function. Smoking cessation rates among smokers with normal lung function did not increase with increasing number of follow-ups. Conclusion. Smokers diagnosed with COPD stopped smoking significantly more often than those with normal lung function.

Publication Type: journal article

Subject Headings:
Pulmonary Disease, Chronic Obstructive
Smoking Cessation
Spirometry
Adult
Clinical Trials
Family Practice
Female
Forced Expiratory Volume
Pulmonary Disease, Chronic Obstructive
Pulmonary Disease, Chronic Obstructive
Male
Middle Age
Prospective Studies
Questionnaires
Risk Factors
Vital Capacity
Human

Source: CINAHL

Full Text: Available in *fulltext* at *EBSCO Host*

31. Office-based spirometry for early detection of obstructive lung disease.

Citation: Journal of the American Academy of Nurse Practitioners, September 2006, vol./is. 18/9(414-21), 1041-2972;1041-2972 (2006 Sep)

Author(s): Wallace LD; Troy KE

Institution: Division of Cardiology, The Heart and Vascular Institute of Florida, Morton Plant Hospital, Clearwater, Florida 33756, USA. lwallace@havi-north.com

Language: English

Abstract: PURPOSE: To review the research-based evidence supporting smoking cessation as the only proven method to reduce chronic obstructive pulmonary disease (COPD) progression and to show that early detection of disease with office-based spirometry can lead to therapeutic intervention before physiologic symptoms arise. DATA SOURCES: Extensive review of national and international scientific literature supplemented with drawings and algorithms. CONCLUSIONS: Early detection of COPD with spirometry, along with smoking cessation, and aggressive intervention can alter the insidious course of this highly preventable disease. It is imperative that nurse practitioners utilize this simple and inexpensive procedure to identify COPD in its earliest stages, so treatment can reduce individual and community disease burden, reduce morbidity and mortality, and help reduce healthcare costs. IMPLICATIONS FOR PRACTICE: Determination of early airflow obstruction supports smoking cessation education, provides objective data for patient motivation, thereby doubling patient compliance and reducing further disease burden.

Country of Publication: United States

Publication Type: Journal Article; Review

Subject Headings:
Algorithms
Decision Trees
Diagnosis, Differential
Disease Progression
Early Diagnosis
Evidence-Based Medicine
Forced Expiratory Volume
Humans
Mass Screening/nu [Nursing]
*Mass Screening/og [Organization & Administration]
Morbidity
Motivation
*Nurse Practitioners/og [Organization & Administration]
*Office Visits
Patient Compliance/px [Psychology]
Patient Education as Topic
Patient Selection
*Primary Health Care/og [Organization & Administration]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/ep [Epidemiology]
Pulmonary Disease, Chronic Obstructive/pc [Prevention & Control]
Pulmonary Disease, Chronic Obstructive/px [Psychology]
Sensitivity and Specificity
Smoking Cessation
*Spirometry/mt [Methods]
Spirometry/nu [Nursing]
Treatment Outcome
Vital Capacity

Source: MEDLINE

Full Text: Available in *fulltext* at *EBSCO Host*
Available in *fulltext* at *ProQuest*

32. [Spirometry in primary care in Navarre, Spain]. [Spanish] La espirometría en atención primaria en Navarra.

Original Title: La espirometría en atención primaria en Navarra.

Citation: Archivos de Bronconeumologia, July 2006, vol./is. 42/7(326-31), 0300-2896;0300-2896 (2006 Jul)

Author(s): Hueto J; Cebollero P; Pascal I; Cascante JA; Eguía VM; Teruel F; Carpintero M

Institution: Sección de Neumología. Hospital Virgen del Camino. Pamplona. Navarra. España. jhuetope@cfnavarra.es

Language: Spanish

Abstract: OBJECTIVE: To analyze the use and quality of spirometry in primary care settings in Navarre, Spain. PATIENTS AND METHODS: A questionnaire was completed simultaneously by professionals responsible for spirometry in all of the primary health care centers in Navarre. Data were collected on availability, model of spirometer, frequency of use, calibration, methods, personnel responsible for testing, and training of personnel. Then, baseline spirometry without a bronchodilator test was performed in 171 patients in their primary health care center and then the test was repeated on the same day in a hospital pneumology department. Spirometry was supervised by 2 pneumologists who jointly assessed the acceptability of the flow-volume curves. The quality of spirometry was assessed according to the recommendations of the American Thoracic Society and the interpretation of spirometry results according to the criteria of the Spanish Society of Pulmonology and Thoracic Surgery (SEPAR). RESULTS: A total of 90.9% of primary health care centers in Navarre have a spirometer, although 22% of those spirometers have never been used. Only 2 centers performed between 10 and 20 spirometry tests per week and none performed more than 20. In 96% of primary health care centers the spirometers were not regularly calibrated. The professionals who performed spirometry were not dedicated for that task in 51.2% of cases, and the mean period of supervised training was 10 hours. When comparisons were made between the mean values obtained in the primary care centers and the pneumology department, statistically significant differences were detected for forced vital capacity ($P < .0001$) and forced expiratory volume in the first second ($P = .0002$). Significant differences were also found between the flow-volume curves performed in the 2 different care settings for the initial and end portions of the curve as well as for the slope. The criteria for reproducibility recommended by the American Thoracic Society were not met in 76% of cases for forced vital capacity and 39.7% of cases for forced expiratory volume in the first second. Incorrect functional diagnosis occurred in 39.7% of spirometry tests and there was a tendency in the primary care settings to falsely diagnose patterns as restrictive and to inadequately classify the severity of obstruction. CONCLUSIONS: Despite the fact that spirometers are available in the majority of primary health care centers in Navarre, we found a marked underuse of these devices and little compliance with recommendations for the use of spirometry. Furthermore, the quality of the measurements performed in this care setting was very low.

Country of Publication: Spain

CAS Registry Number: 0 (Bronchodilator Agents)

Publication Type: English Abstract; Evaluation Studies; Journal Article

Subject Headings:
Adult
Aged
Asthma/di [Diagnosis]
Asthma/pp [Physiopathology]
Bronchial Provocation Tests
Bronchodilator Agents/du [Diagnostic Use]
Calibration/st [Standards]
Dyspnea/di [Diagnosis]
Dyspnea/pp [Physiopathology]
Female
Forced Expiratory Volume
Guideline Adherence
Hospital Departments/sn [Statistics & Numerical Data]

Humans
Male
Middle Aged
Primary Health Care/mt [Methods]
*Primary Health Care/sn [Statistics & Numerical Data]
Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/pp [Physiopathology]
Pulmonary Medicine
Reproducibility of Results
Smoking
Spain
Spirometry/is [Instrumentation]
Spirometry/mt [Methods]
*Spirometry/sn [Statistics & Numerical Data]
Spirometry/ut [Utilization]
Vital Capacity

Source: MEDLINE

33. Influence of spirometry on patient management in diagnostic studies unknown.

Citation: Chest, June 2006, vol./is. 129/6(1733-4; author reply 1734), 0012-3692;0012-3692 (2006 Jun)

Author(s): Poels PJ; olde Hartman TC; Schermer TR; Albers M; van Weel C

Language: English

Country of Publication: United States

Publication Type: Comment; Letter

Subject Headings:
Humans
Middle Aged
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Pulmonary Disease, Chronic Obstructive/th [Therapy]
Quality of Life
Smoking
Smoking Cessation
*Spirometry

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*
Available in *fulltext* at *ProQuest*

34. The added value of C-reactive protein to clinical signs and symptoms in patients with obstructive airway disease: results of a diagnostic study in primary care.

Citation: BMC Family Practice, 2006, vol./is. 7/(28), 1471-2296;1471-2296 (2006)

Author(s): Schneider A; Dinant GJ; Maag I; Gantner L; Meyer JF; Szecsenyi J

Institution: University Medical Hospital Heidelberg, Dept. of General Practice and Health Services Research, Heidelberg, Germany. antonius.schneider@med.uni-heidelberg.de

Language: English

Abstract: BACKGROUND: To evaluate the diagnostic accuracy of clinical signs and symptoms, C-reactive protein (CRP) and spirometric parameters and determine their interrelation in patients suspected to have an obstructive airway disease (OAD) in primary care. METHODS: In a cross sectional diagnostic study, 60 adult patients coming to the general practitioner (GP) for the first-time with complaints suspicious for obstructive airway disease (OAD) underwent spirometry. Peak expiratory flow (PEF)-variability within two weeks was determined in patients with inconspicuous spirometry. Structured medical histories were documented and CRP was measured. The reference standard was the

Tiffeneau ratio (FEV1/VC) in spirometry and the PEF-variability. OAD was diagnosed when FEV1/VC < or = 70% or PEF-variability > 20%. RESULTS: 37 (62%) patients had OAD. The best cut-off value for CRP was found at 2 mg/l with a diagnostic odds ratio (OR) of 4.4 (95% CI 1.4-13.8). Self-reported wheezing was significantly related with OAD (OR 3.4; CI 1.1-10.3), whereas coughing was inversely related (OR 0.2; CI 0.1-0.7). The diagnostic OR of CRP increased when combined with dyspnea (OR 8.5; 95% CI 1.7-42.3) or smoking history (OR 8.4; 95% CI 1.5-48.9). CRP (p = 0.004), FEV1 (p = 0.001) and FIV1 (p = 0.023) were related with the severity of dyspnea. CRP increased with the number of cigarettes, expressed in pack years (p = 0.001). CONCLUSION: The diagnostic accuracy of clinical signs and symptoms was low. The diagnostic accuracy of CRP improved in combination with dyspnea and smoking history. Due to their coherence with the severity of dyspnea and number of cigarettes respectively, CRP and spirometry might allow risk stratification of patients with OAD in primary care. Further studies need to be done to confirm these findings.

Country of Publication: England

CAS Registry Number: 9007-41-4 (C-Reactive Protein)

Publication Type: Journal Article

Subject Headings:
Adult
*C-Reactive Protein/an [Analysis]
Confidence Intervals
Cross-Sectional Studies
Dyspnea/et [Etiology]
Family Practice/mt [Methods]
Female
Germany/ep [Epidemiology]
Humans
Male
Medical History Taking
Middle Aged
*Peak Expiratory Flow Rate
Predictive Value of Tests
*Primary Health Care/mt [Methods]
Pulmonary Disease, Chronic Obstructive/bl [Blood]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/ep [Epidemiology]
Respiratory Sounds/et [Etiology]
Severity of Illness Index
Smoking/ae [Adverse Effects]
Smoking/ep [Epidemiology]
*Spirometry

Source: MEDLINE

Full Text: Available in *fulltext* at *BioMedCentral*
Available in *fulltext* at *National Library of Medicine*

35. COPD. A short step to diagnosis.

Citation: Nursing in the Community, 01 January 2006, vol./is. 7/1(27-27), 16490657

Author(s): Moore A

Language: English

Abstract: Greater use of spirometry in primary care settings will help in the early identification and treatment of COPD.

Publication Type: journal article

Subject Headings:
Pulmonary Disease, Chronic Obstructive
Spirometry
Forced Expiratory Volume
Vital Capacity

Source: CINAHL

36. Co-morbidity in older patients with COPD - its impact on health service utilisation and quality of life, a community study

Citation: Age and Ageing, 2006, vol./is. 35/1(33-37), 0002-0729 (Jan 2006)

Author(s): Yeo, J; Karimova, G; Bansal, S

Abstract: Co-morbidity has been shown to be an important consideration in COPD with an estimated prevalence of 84%. In the Netherlands, a weak association between health-related quality of life and lung function has been found, with a closer link to co-morbidity. The objective of the study was to determine the influence of co-morbidity on quality of life and health service utilisation in older patients with COPD in the community. The design was an observational cohort study. The setting was a general practice in the North East of England that has a list size of 8, 300. The participants were 27 patients aged 70 years or above on the practice COPD register. The measurements were data on age and sex, spirometry to confirm the diagnosis of COPD, questionnaires to assess quality of life, activities of daily living (ADLs) and co-morbidity. Health service utilisation was recorded by the number of primary and secondary care attendances in the previous year. Ten had mild, 12 had moderate, and five had severe disease. Mean age was 76 years. Quality of life (QOL), co-morbidity and health service utilisation measurements were not significantly different between COPD severity groups. There was a significant positive correlation between increasing co-morbidity and poor QOL ($r = 0.45$, $P<0.05$), and significant negative correlation between co-morbidity and ADL scores (scored inversely), $r = -0.54$, $P<0.05$. Significant negative correlation was found between co-morbidity and primary care attendances ($r = -0.41$, $P<0.05$) and significant positive correlation between worsening QOL and secondary care attendances ($r = 0.46$, $P<0.05$). Co-morbidity has an important part to play in COPD assessment, more accurately reflecting QOL in our population. Health service utilisation did not correlate to forced expiratory volume (FEV1)-defined COPD severity. Cites 16 references. [Journal abstract]

Publication Type: Article

Subject Headings:
LUNG DISEASES
QUALITY OF LIFE
HEALTH SERVICE UTILISATION
CHRONIC DISEASE

Source: HMIC

Full Text: Available in *fulltext* at *Highwire Press*
Available in *fulltext* at *ProQuest*

37. Spirometry for chronic obstructive pulmonary disease case finding in primary care?.

Citation: American Journal of Respiratory & Critical Care Medicine, December 2005, vol./is. 172/12(1481-2), 1073-449X;1073-449X (2005 Dec 15)

Author(s): Boushey H; Enright P; Samet J

Language: English

Country of Publication: United States

Publication Type: Editorial; Research Support, Non-U.S. Gov't

Subject Headings:
Humans
Outcome and Process Assessment (Health Care)
Practice Guidelines as Topic
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/th [Therapy]
*Spirometry

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*

Available in *fulltext* at *ProQuest*

38. Knowledge and use of office spirometry for the detection of chronic obstructive pulmonary disease by primary care physicians.

Citation: Respiratory Care, December 2005, vol./is. 50/12(1639-48), 0020-1324;0020-1324 (2005 Dec)

Author(s): Kaminsky DA; Marcy TW; Bachand M; Irvin CG

Institution: Fletcher Allen Health Care, University of Vermont College of Medicine, Burlington, 05405, USA. david.kaminsky@uvm.edu

Language: English

Abstract: BACKGROUND: The importance of office spirometry has been strongly advocated in the pulmonary community, but whether its importance is recognized and accepted by primary care physicians is less well established. METHODS: To assess primary care physicians' knowledge and use of office spirometry for the detection of chronic obstructive pulmonary disease, we conducted a brief mail survey on the local practice of office spirometry, barriers to performing office spirometry, and general knowledge about spirometry. We also provided 60-min educational workshops to assess whether such an approach would increase spirometry testing or perceptions about spirometry. RESULTS: Twenty-nine of 57 (51%) primary care offices responded to the survey. Of these, 66% owned their own spirometer. The most common reasons for not performing spirometry were uncertainty about the impact of the test (41%), physician and staff unfamiliarity (38%), and lack of training (34%). Twenty-one respondents participated in the workshops. In the 3 months following the workshops, the number of spirometry tests increased by 59% ($p = 0.004$). After the workshops, the proportion of clinics that reported reasons for not performing the test decreased by 13% ($p = 0.01$), but important barriers to performing office spirometry were still present, including physician and staff unfamiliarity (22%), uncertain interpretation of results (22%), time (22%), and reimbursement (22%). CONCLUSIONS: The general knowledge and use of office spirometry in the primary care community is poor, but can be improved, at least in the short-term, by a simple educational workshop.

Country of Publication: United States

Publication Type: Evaluation Studies; Journal Article; Research Support, N.I.H., Extramural; Research Support, Non-U.S. Gov't

Subject Headings:
*Clinical Competence
Feasibility Studies
Health Care Surveys
Humans
*Inservice Training
Physician's Practice Patterns
Pilot Projects
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Spirometry/ut [Utilization]

Source: MEDLINE

39. Should we use spirometry in the early detection of COPD?.

Citation: European Respiratory Journal, September 2005, vol./is. 26/3(558-9), 0903-1936;0903-1936 (2005 Sep)

Author(s): White P

Language: English

Country of Publication: Denmark

Publication Type: Letter

Subject Headings: Early Diagnosis

Humans
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Spirometry

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*

40. Benefits of and barriers to the widespread use of spirometry.

Citation: Current Opinion in Pulmonary Medicine, March 2005, vol./is. 11/2(115-20), 1070-5287;1070-5287 (2005 Mar)

Author(s): Petty TL

Institution: University of Colorado Health Sciences Center, Denver, Colorado 80203-3154, USA. tlpdoc@aol.com

Language: English

Abstract: PURPOSE OF REVIEW: To review the basis for spirometry, its benefits in diagnosing and managing both acute and chronic pulmonary disorders with emphasis on chronic obstructive pulmonary disease, and to critically examine the barriers to its widespread use. RECENT FINDINGS: A number of recent articles have established the scientific basis for spirometry in the early identification of chronic obstructive pulmonary disease and in improving smoking cessation in patients with chronic obstructive pulmonary disease. Economic and other considerations are reported. SUMMARY: Spirometry is an important office diagnostic device that should be used by all primary care and most specialist physicians. Spirometry is to dyspnea as the electrocardiogram is to chest pain.

Country of Publication: United States

Publication Type: Journal Article; Review

Subject Headings:
Adult
Aged
Education, Medical/mt [Methods]
Health Education/og [Organization & Administration]
Health Services Accessibility
Humans
Middle Aged
Practice Guidelines as Topic
*Primary Health Care/mt [Methods]
*Professional Practice/sn [Statistics & Numerical Data]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Smoking Cessation/mt [Methods]
Spirometry/ec [Economics]
Spirometry/is [Instrumentation]
*Spirometry/ut [Utilization]
United States

Source: MEDLINE

41. Improving early detection of COPD: the role of spirometry screening assessment.

Citation: Professional Nurse, November 2004, vol./is. 20/3(31-3), 0266-8130;0266-8130 (2004 Nov)

Author(s): Holt K

Institution: Cleveleys Group Practice, Cleveleys Health Centre, Cleveleys FY5 3LF, UK. kay.holt@gp-p81073.nhs.uk

Language: English

Abstract: Chronic obstructive pulmonary disease is on the increase, yet public awareness of the condition remains low. Early diagnosis and smoking cessation can arrest the decline in

lung status. A primary care-based spirometry screening assessment initiative has improved diagnosis, resulting in early intervention for patients with COPD.

Country of Publication: England

Publication Type: Evaluation Studies; Journal Article

Subject Headings:
Early Diagnosis
Forced Expiratory Volume
Humans
*Mass Screening/mt [Methods]
Mass Screening/nu [Nursing]
Mass Screening/st [Standards]
Nurse Practitioners/og [Organization & Administration]
Nursing Assessment/mt [Methods]
Nursing Assessment/st [Standards]
Nursing Evaluation Research
Practice Guidelines as Topic
Primary Health Care/og [Organization & Administration]
Program Evaluation
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/et [Etiology]
Retrospective Studies
Smoking/ae [Adverse Effects]
*Spirometry/mt [Methods]
Spirometry/nu [Nursing]
Spirometry/st [Standards]
Time Factors
Vital Capacity

Source: MEDLINE

42. [The rate of airflow limitation among the elderly undergoing spirometry in a university hospital].

Citation: Rinsho Byori - Japanese Journal of Clinical Pathology, August 2004, vol./is. 52/8(649-54), 0047-1860;0047-1860 (2004 Aug)

Author(s): Tojo N; Umino T; Miyasaka N

Institution: The Department of Clinical Laboratory, Tokyo Medical and Dental University, Bunkyo-ku, Tokyo 113-8519.

Language: Japanese

Abstract: The aim of this study was to examine the rate of airflow limitation among the elderly undergoing spirometry prior to surgical operation, and to evaluate whether or not spirometry is useful for the early detection of COPD. A total of 3,086 patients (1,717 men and 1,369 women) ranging in age from 40 to 93 underwent screening spirometry from January to December 2003 in Tokyo Medical and Dental University Hospital. Among the total population, 2,135 patients (1,188 men and 947 women) were ordered to undergo the spirometry prior to surgical operation, airflow limitation (FEV1/FVC < 70%) was observed in 19.5% (n=417) of the cases and was considerably more frequent in men than in women(27.0%[n=321] vs. 10.1%[n=96]). The rate of FEV1/FVC < 70% in those 2,135 patients increased with age: 6.2%, 9.9%, 19.2%, 32.5% and 34.1% of patients in their 40s, 50s, 60s, 70s, 80s and over, respectively. Among the patients with airflow limitation, 35% of the cases revealed FEV1 > or = 80% predicted; 50%, 50 < or = FEV1 < 80% predicted; 14%, 30 < or = FEV1 < 50% predicted; 1%, FEV1 < 30% predicted. Patients with mild to moderate airflow limitation rarely consulted the pulmonary medicine department. The prevalence of airflow limitation was more frequent among in- and out-patients than in the random sample population. Spirometry prior to surgical operation is useful for the early detection of COPD and these data could be an important source for medical staff seeking a definitive diagnosis of patients revealing airflow limitation.

Country of Publication: Japan

Publication Type: English Abstract; Journal Article

Subject Headings:
Adult
Aged
Aged, 80 and over
Female
*Forced Expiratory Volume
Hospitals, University/sn [Statistics & Numerical Data]
Humans
Japan/ep [Epidemiology]
Male
Middle Aged
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/ep [Epidemiology]
Pulmonary Disease, Chronic Obstructive/pp [Physiopathology]
*Spirometry
*Vital Capacity

Source: MEDLINE

43. Office spirometry: don't just blow it off.

Citation: Medical Economics, July 2004, vol./is. 81/13(63-5), 0025-7206;0025-7206 (2004 Jul 9)

Author(s): Anderson S

Language: English

Country of Publication: United States

Publication Type: Journal Article

Subject Headings:
Humans
Missouri
*Physicians' Offices
*Primary Health Care/og [Organization & Administration]
Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/pp [Physiopathology]
*Pulmonary Disease, Chronic Obstructive/pc [Prevention & Control]
Pulmonary Disease, Chronic Obstructive/rh [Rehabilitation]
Respiratory Therapy
*Spirometry/ut [Utilization]

Source: MEDLINE

44. [Comments on a study on the comparison of the use of spirometry and COPD diagnosis in PC and pneumology]. [Spanish] Precisiones a un estudio sobre comparación del uso de espirometría y diagnóstico de EPOC entre la atención primaria y neumología.

Original Title: Precisiones a un estudio sobre comparación del uso de espirometría y diagnóstico de EPOC entre la atención primaria y neumología.

Citation: Atencion Primaria, April 2004, vol./is. 33/6(351; author reply 352), 0212-6567;0212-6567 (2004 Apr 15)

Author(s): Calvo Corbella E; Collada Holgueras G

Language: Spanish

Country of Publication: Spain

Publication Type: Comment; Letter

Subject Headings:
Humans
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Medicine
*Spirometry/mt [Methods]

Source: MEDLINE

45. Office spirometry significantly improves early detection of COPD in general practice: the DIDASCO Study.

Citation: Chest, April 2004, vol./is. 125/4(1394-9), 0012-3692;0012-3692 (2004 Apr)

Author(s): Buffels J; Degryse J; Heyrman J; Decramer M; DIDASCO Study

Institution: Department of General Practice, Katholieke Universiteit, Leuven, Belgium. johan.buffels@coditel.net

Language: English

Abstract: STUDY OBJECTIVES: To determine if spirometry is essential for the early detection of COPD in general practice, compared to the screening value of a short questionnaire. METHODS: A prospective survey of the population aged 35 to 70 years visiting their general practitioner (GP) during a 12-week period, using a questionnaire on symptoms of obstructive lung disease (OLD). Spirometry was performed in all participants with positive answers and in a 10% random sample from the group without complaints. Twenty GPs were provided with a hand-held spirometer, and received training in performance and interpretation of lung function tests. All 35- to 70-year-old patients (n = 3,408) were screened for current use of bronchodilators. The subgroup receiving bronchodilators (n = 250, 7%) was assumed to have OLD, and was excluded. Airflow obstruction was defined according to the European Respiratory Society standards. RESULTS: The positive predictive power of the questionnaire was low (sensitivity, 58%; specificity, 78%; likelihood ratio, 2.6). One hundred twenty-six cases of formerly unknown OLD were detected in the group of patients with complaints, vs an extrapolated number of 90 in the group without complaints. Despite a negative predictive value of 95% for the questionnaire used, 42% of the newly diagnosed cases of OLD would not have been detected without spirometry. CONCLUSIONS: The use of a spirometer is mandatory if early stages of OLD are to be detected in general practice. Screening for airflow obstruction almost doubles the number of known patients with OLD.

Country of Publication: United States

CAS Registry Number: 0 (Bronchodilator Agents)

Publication Type: Clinical Trial; Journal Article; Randomized Controlled Trial; Research Support, Non-U.S. Gov't

Subject Headings:
Adult
Aged
Bronchodilator Agents/tu [Therapeutic Use]
Family Practice
Female
Forecasting
Humans
Male
Middle Aged
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Questionnaires
Sensitivity and Specificity
*Spirometry

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*
Available in *fulltext* at *ProQuest*

46. Early detection of COPD in primary care: screening by invitation of smokers aged 40 to 55 years.

Citation: British Journal of General Practice, March 2004, vol./is. 54/500(201-6), 0960-1643;0960-1643 (2004 Mar)

Author(s): Stratelis G; Jakobsson P; Molstad S; Zetterstrom O

Institution: Institution of Health and Society, University Hospital, Linkoping, Sweden. Georgios.Stratelis@lio.se

Language: English

Abstract: BACKGROUND: The incidence of chronic obstructive pulmonary disease (COPD) is increasing in developed countries, as is the mortality rate. The main cause of COPD is smoking, and COPD is usually diagnosed at a late stage. AIM: To evaluate a method to detect COPD at an early stage in smokers in a young age group (40-55 years). DESIGN OF STUDY: Prospective descriptive study. SETTING: The city of Motala (45,000 inhabitants) and its surrounding rural areas (43,000 inhabitants) in south-east Sweden. Nineteen thousand, seven hundred and fifty subjects were between 40 and 55 years of age. According to Swedish statistics, approximately 27% of this population are smokers. METHOD: Smokers aged between 40 and 55 years were invited to have free spirometry testing in primary healthcare centres. Placards were placed in pharmacies and health centres and advertising was carried out locally twice a year. RESULTS: A total of 512 smokers responded. The prevalence of COPD was 27% (n = 141). The COPD was classified as mild obstruction in 85% (n = 120), moderate in 13% (n = 18) and severe in 2% (n = 3) according to the European Respiratory Society classification. Knowledge of the disease COPD was acknowledged by 39% of the responders to the questionnaire. Logistic regression analysis showed that age, male sex, number of pack years, dyspnoea and symptoms of chronic bronchitis significantly increased the odds of having COPD. The adjusted odds ratio was significant for having > 30 pack years. CONCLUSIONS: This method of inviting relatively young smokers selected a population of smokers with a high incidence of COPD, and may be one way of identifying smokers with COPD in the early stages.

Country of Publication: England

Publication Type: Journal Article; Research Support, Non-U.S. Gov't

Subject Headings:
Adult
Epidemiologic Methods
Female
Humans
Male
*Mass Screening/mt [Methods]
Middle Aged
*Primary Health Care/mt [Methods]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/ep [Epidemiology]
*Smoking/ae [Adverse Effects]
Spirometry/mt [Methods]
Sweden/ep [Epidemiology]

Source: MEDLINE

Full Text: Available in *fulltext* at *National Library of Medicine*

47. rly detection of COPD in primary care: screening by invitation of smokers aged 40-55 years.

Citation: British Journal of General Practice, 2004, vol./is. 54/500(201-206), 60-1-643 (March 2004)

Author(s): lmon, Peter

Abstract: CKGROUND: The incidence of chronic obstructive pulmonary disease (COPD) is increasing in developed countries, as is the mortality rate. The main cause of COPD is smoking, and COPD is usually diagnosed at a late stage. AIM: To evaluate a method to detect COPD at an early stage in smokers in a young age group (40-55 years). DESIGN OF STUDY: Prospective descriptive study. SETTING: The city of Motala (45,000 inhabitants) and its surrounding rural areas (43,000 inhabitants) in south-east Sweden. Nineteen thousand, seven hundred and fifty subjects were between 40 and 55 years of age. According to Swedish statistics, approximately 27 per cent of this population are smokers. METHOD: Smokers aged between 40 and 55 years were invited to have free

spirometry testing in primary healthcare centres. Placards were placed in pharmacies and health centres and advertising was carried out locally twice a year. RESULTS: A total of 512 smokers responded. The prevalence of COPD was 27 per cent (n = 141). The COPD was classified as mild obstruction in 85 per cent (n = 120), moderate in 13 per cent (n = 18) and severe in two per cent (n = 3) according to the European Respiratory Society classification. Knowledge of the disease COPD was acknowledged by 39 per cent of the responders to the questionnaire. Logistic regression analysis showed that age, male sex, number of pack years, dyspnoea and symptoms of chronic bronchitis significantly increased the odds of having COPD. The adjusted odds ratio was significant for having > 30 pack years. CONCLUSIONS: This method of inviting relatively young smokers selected a population of smokers with a high incidence of COPD, and may be one way of identifying smokers with COPD in the early stages. 1 fig. 4 tables 18 refs. [Abstract]

Publication Type: Article

Subject Headings: EDEN

Source: HMIC

Full Text: Available in *fulltext* at *National Library of Medicine*

48. Strategies for screening for chronic obstructive pulmonary disease... includes discussion.

Citation: Respiratory Care, 01 December 2003, vol./is. 48/12(1194-1203), 00201324

Author(s): Enright PL; Kaminsky DA

Language: English

Abstract: Chronic obstructive pulmonary disease is easily detected in its preclinical phase, using office spirometry. Successful smoking cessation prevents further disease progression in most patients. Spirometry measures the ratio of the forced expiratory volume in the first second to the forced vital capacity (FEV(1)/FVC), which is the most sensitive and specific test for detecting airflow limitation. Primary care practitioners see the majority of adult smokers, but few primary care practitioners currently have spirometers or regularly order spirometry for their smoker patients. Improvements in spirometry software have made it much easier to obtain good quality spirometry test sessions, thereby reducing the misclassification rate. Respiratory therapists and pulmonary function technologists can help primary care practitioners select good office spirometers for identifying chronic obstructive pulmonary disease and teach staff how to use spirometers correctly.

Publication Type: journal article

Subject Headings: Health Screening
Pulmonary Disease, Chronic Obstructive
Spirometry
Forced Expiratory Volume
Pulmonary Disease, Chronic Obstructive
Smoking Cessation
Spirometry
Spirometry

Source: CINAHL

49. Spirometry in primary care: is it good enough to face demands like World COPD Day?.

Citation: European Respiratory Journal, November 2003, vol./is. 22/5(725-7), 0903-1936;0903-1936 (2003 Nov)

Author(s): Schermer T; Eaton T; Pauwels R; van Weel C

Language: English

Country of Publication: Denmark

Publication Type: Editorial

Subject Headings: Humans
Primary Health Care/og [Organization & Administration]

*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
*Spirometry

Source: MEDLINE

Full Text: Available in *fulltext* at *Highwire Press*

50. Airway inflammation in COPD: physiological outcome measures and induced sputum.

Citation: European Respiratory Journal - Supplement, June 2003, vol./is. 41/(19s-28s), 0904-1850;0904-1850 (2003 Jun)

Author(s): Crapo RO; Jensen RL; Hargreave FE

Institution: Pulmonary Division, LDS Hospital and University of Utah, Salt Lake City, UT 84143, USA. Ldrcrapo@ihc.com

Language: English

Abstract: Chronic obstructive pulmonary disease (COPD) is a result of airway inflammation, and the best predictor of COPD is the early detection of airflow limitation by spirometry. The Global Initiative for Obstructive Lung Disease Workshop Report defines airflow limitation using simple spirometric indices. Available guidelines categorise the severity of COPD using forced expiratory volume in one second (FEV1) and forced vital capacity (FVC), with symptoms playing a minor role in the assessment. Current standards define COPD by progressive loss of FEV1, and thus longitudinal decline in FEV1 will be the primary outcome variable for intervention studies aimed at preventing or reducing the loss of pulmonary function. There is evidence, however, that the variable FEV1/FVC and FEV1 are often not measured properly in all settings. This article will discuss the roles of physiological measurements in diagnosing COPD and physiological outcome measures for COPD. It does not formally compare physiological measures with other outcome measures, such as symptoms or quality of life. Additionally, improved treatment of established disease requires a better understanding of the inflammatory process and its clinical effects and treatment. The inflammatory process, and how drugs affect it, can be studied noninvasively or relatively noninvasively by using refined methods of examining spontaneous or induced sputum. Enhanced understanding of the use of induced sputum will assist in predicting patients' responses to short- and long-term inhaled corticosteroid treatment, and the methods of sputum examination need to be simplified so that they can be applied more easily to clinical practice.

Country of Publication: Denmark

Publication Type: Journal Article; Review

Subject Headings:
Aged
Aged, 80 and over
Airway Resistance
Bronchial Provocation Tests
Bronchitis/co [Complications]
*Bronchitis/di [Diagnosis]
Female
Forced Expiratory Volume
Humans
Inflammation/co [Complications]
Inflammation/di [Diagnosis]
Male
Middle Aged
Prognosis
Pulmonary Disease, Chronic Obstructive/co [Complications]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Gas Exchange
Respiratory Function Tests
Sensitivity and Specificity
Severity of Illness Index
*Spirometry

*Sputum/cy [Cytology]
*Vital Capacity/ph [Physiology]

Source: MEDLINE

51. Detection of asthma and chronic obstructive pulmonary disease in primary care.

Citation: European Respiratory Journal - Supplement, January 2003, vol./is. 39/(16s-22s), 0904-1850;0904-1850 (2003 Jan)

Author(s): van Schayck CP; Chavannes NH

Institution: Dept of General Practice, Research Institute ExTra, Maastricht University, Maastricht, the Netherlands. onno.vanschayck@hag.unimaas.nl

Language: English

Abstract: Chronic obstructive pulmonary disease (COPD) and asthma are major health problems, the number of patients with these diseases is still rising and only 25-50% of these patients are known to their doctors. Lung function gradually decreases in COPD and asthmatic patients during their lives. Due to adaptation of the patients or due to the doctor being unaware of the symptoms, COPD is often diagnosed late in its course and when finally diagnosed, lung function is often relatively poor. Underdiagnosis and consequently undertreatment might play an important role in the increase in morbidity and mortality as a result of COPD and asthma. Early detection and treatment might improve the long-term prognosis of these patients and this secondary prevention may also prevent irreversible loss of function. The identification of patients is useless if no effective preventive measures are available. In asthma, inhaled corticosteroids have been shown to have distinct effects on the progression of the disease. However, in COPD inhaled corticosteroids have only been shown to have some effects and the long-term effects on lung function have been disappointing. At present, the most effective treatment available for COPD is the cessation of smoking. It appears that a smoker at risk of developing COPD is more motivated to stop smoking than someone who is not at risk and this may help a physician in encouraging an attempt to quit. General practitioners appear to be already using this knowledge, as they seem more likely to advise smokers to quit smoking if they perceive their problems to be smoking related.

Country of Publication: Denmark

Publication Type: Journal Article; Review

Subject Headings:
*Asthma/di [Diagnosis]
Asthma/ec [Economics]
Costs and Cost Analysis
Humans
Mass Screening/ec [Economics]
Mass Screening/mt [Methods]
Physicians, Family
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/ec [Economics]
Respiratory Function Tests
Risk Factors
Smoking Cessation

Source: MEDLINE

52. John Hutchinson's mysterious machine revisited.

Citation: CHEST, 02 May 2002, vol./is. 121/5(0-4), 00123692

Author(s): Petty TL

Language: English

Abstract: John Hutchinson, a surgeon, recognized that the volume of air that can be exhaled from fully inflated lungs is a powerful indicator of longevity. He invented the spirometer to

measure what he called the vital capacity, ie, the capacity to live. Much later, the concept of the timed vital capacity, which became known as the FEV(1), was added. Together, these two numbers, vital capacity and FEV(1), are useful in identifying patients at risk of many diseases, including COPD, lung cancer, heart attack, stroke, and all-cause mortality. This article cites some of the rich history of the development of spirometry, and explores some of the barriers to the widespread application of simple spirometry in the offices of primary care physicians.

Publication Type: journal article

Subject Headings:
Spirometry
Spirometry
Radiography, Thoracic
Lung Diseases, Obstructive
Health Screening
Vital Capacity
Sphygmomanometers

Source: CINAHL

Full Text:
Available in *fulltext* at *Highwire Press*
Available in *fulltext* at *ProQuest*

53. [Gold strategy, early detection of COPD and need for "gold" standard of spirometry]. [Polish] Strategia gold, wczesne wykrywanie pochp, a potrzeba "zlotego" standardu spirometrii.

Original Title: Strategia gold, wczesne wykrywanie pochp, a potrzeba "zlotego" standardu spirometrii.

Citation: Pneumonologia i Alergologia Polska, 2002, vol./is. 70/9-10(439-43), 0867-7077;0867-7077 (2002)

Author(s): Wesolowski S; Boros P; Franczuk M

Institution: Zakladu Fizjopatologii Oddychania Instytutu Gruźlicy i Chorób Pluc w Warszawie.

Language: Polish

Country of Publication: Poland

Publication Type: Journal Article; Review

Subject Headings:
Humans
Poland
Primary Prevention/st [Standards]
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/pp [Physiopathology]
Research/td [Trends]
Risk Assessment
Severity of Illness Index
Spirometry/mt [Methods]
Spirometry/st [Standards]
*Spirometry
World Health Organization

Source: MEDLINE

54. [Early detection of COPD in smokers from Warsaw using spirometric screening]. [Polish] Wczesne rozpoznawanie POChP badaniem spirometrycznym u palacych papierosy mieszkanców Warszawy.

Original Title: Wczesne rozpoznawanie POChP badaniem spirometrycznym u palacych papierosy mieszkanców Warszawy.

Citation: Pneumonologia i Alergologia Polska, 2002, vol./is. 70/3-4(139-47), 0867-7077;0867-7077 (2002)

Author(s): Bednarek M; Plywaczewski R; Górecka D; Puścinska E; Nowinski A; Zielinski J

Institution: Klinika Chorób Pluc Instytutu Gruźlicy i Chorób Pluc w Warszawie.

Language: Polish

Abstract: COPD is the fourth leading cause of death in Poland. The disease is diagnosed not early enough. The aim of the study was to establish prevalence of COPD in smokers, inhabitants of Warsaw. Therefore, using local mass media, smokers with at least 10 pack-years history of smoking, over 40 years of age, were invited for a free spirometry. The spirometries were performed during 33 weekends. 3340 subjects (51.8% M and 48.2% F) mean age 57 +/- 13.2 years were examined. Most of them were current smokers (57.8%) or ex-smokers (27%) with a history of 31.9 +/- 18.8 packyears, the remaining subjects (15.2%) declared themselves as a life non-smokers. From all screened 1520 (45.6%) presented airflow limitation (AL). Following ERS recommendations, AL was classified as mild in 27.7%, moderate in 11.1% and severe in 6.8% subjects. One third of examined declared morning cough (36.9%) or sputum production (34.8%), or both symptoms (26.7%). Morning cough ($p < 0.05$) or cough together with sputum production ($p < 0.01$) were related to result of spirometry. Subjects aged > or = 40 years with a history of > or = 10 packyears had AL diagnosed in 50.1%, in contrast to younger than 40 years and smoking < 10 packyears in whom AL was detected in 14.3%. In life non-smokers AL was diagnosed in 35.9%. The majority of non-smokers were females (70%), 7.5% declared history of bronchial asthma. The great efficacy of AL detection in targeted population (50%) should be an incentive to perform routine spirometric examination in smokers aged 40+ with a history of 10+ packyears of smoking.

Country of Publication: Poland

Publication Type: English Abstract; Journal Article

Subject Headings:
Adult
Age Distribution
Age Factors
Aged
Attitude to Health
Female
Humans
Male
*Mass Screening/mt [Methods]
Middle Aged
Poland/ep [Epidemiology]
Prevalence
*Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Pulmonary Disease, Chronic Obstructive/ep [Epidemiology]
*Pulmonary Disease, Chronic Obstructive/et [Etiology]
Pulmonary Disease, Chronic Obstructive/pc [Prevention & Control]
Risk Factors
Sensitivity and Specificity
*Smoking/ae [Adverse Effects]
Smoking/ep [Epidemiology]
*Spirometry
Time Factors

Source: MEDLINE

55. asibility and effectiveness of a pulmonary rehabilitation programme in a community hospital setting.

Citation: British Journal of General Practice, 2002, vol./is. 52/480(539-542), 60-1-643 (July 2002)

Author(s): rd, Janet A.

Abstract: CKGROUND: Pulmonary rehabilitation programmes run in secondary care have proved to be one of the most effective interventions for patients with chronic obstructive pulmonary disease (COPD). AIM: To assess whether a pulmonary rehabilitation programme, similar to that run in secondary care, could be established in a primary care-run community hospital and whether it could achieve similar benefits in patients

with moderately severe COPD. DESIGN OF STUDY: Uncontrolled prospective intervention study. SETTING: A primary care-run community hospital. METHOD: Thirty-four patients with COPD aged between 53 and 80 years of age (mean = 70 years) with a forced expiratory volume (FEV1) of 30 to 50 per cent (mean = 40 per cent) predicted were enrolled in a programme established in the activities room at Honiton Community Hospital. Patients were assessed at the start, on completion of the programme, and six months after completion, using spirometry, shuttle-walking distance, and short form-36 (SF-36) and chronic respiratory questionnaire (CRQ) scores. RESULTS: All but one patient completed the programme. There were significant improvements in the walking distance (by a mean of 100m), in the SF-36, and in all domains of the CRQ. There was no significant change in the FEV1 or forced vital capacity. CONCLUSION: Pulmonary rehabilitation programmes can be run in community hospitals. They appear to be as effective as those run in secondary care and patients may find them easier to access. 2 tables 27 refs. [Summary]

Publication Type: Article

Subject Headings:

Source: HMIC

Full Text: Available in *fulltext* at *National Library of Medicine*

56. Recognising the importance of spirometry in primary care.

Citation: Community Nurse, January 2001, vol./is. 6/12(23-4), 1351-1416;1351-1416 (2001 Jan)

Author(s): Joyce N

Language: English

Country of Publication: England

Publication Type: Journal Article

Subject Headings:
Community Health Nursing
Humans
*Primary Health Care
*Pulmonary Disease, Chronic Obstructive/nu [Nursing]
*Spirometry/nu [Nursing]

Source: MEDLINE

57. Issues in respiratory nursing. COPD: focus on prevention: recommendations of the National Lung Health Education Program.

Citation: Heart & Lung, 01 November 2000, vol./is. 29/6(446-449), 01479563

Author(s): Boyle AH; Waters HF

Language: English

Abstract: The purpose of this article is to provide the nurse in primary care with an overview of the National Lung Health Education Program guidelines. We outline the components of the guidelines for spirometry testing in persons at risk for chronic obstructive pulmonary disease. The role of spirometry testing in identifying those persons for whom smoking cessation is crucial is emphasized.

Publication Type: journal article

Subject Headings:
Respiratory Nursing
Spirometry
Pulmonary Disease, Chronic Obstructive
Health Education
Risk Assessment
Pulmonary Disease, Chronic Obstructive

Source: CINAHL

58. Office spirometry for lung health assessment in adults: a consensus statement from the National Lung Health Education Program.

Citation: Respiratory Care, 01 May 2000, vol./is. 45/5(513-530), 00201324

Author(s): Ferguson GT; Enright PL; Buist AS; Higgins MW

Language: English

Abstract: Chronic obstructive pulmonary disease (COPD) is easily detected in its preclinical phase using spirometry, and successful smoking cessation (a cost-effective intervention) prevents further disease progression. This consensus statement recommends the widespread use of office spirometry by primary-care providers for patients > or = 45 years old who smoke cigarettes. Discussion of the spirometry results with current smokers should be accompanied by strong advice to quit smoking and referral to local smoking cessation resources. Spirometry also is recommended for patients with respiratory symptoms such as chronic cough, episodic wheezing, and exertional dyspnea in order to detect airways obstruction due to asthma or COPD. Although diagnostic-quality spirometry may be used to detect COPD, we recommend the development, validation, and implementation of a new type of spirometry-office spirometry--for this purpose in the primary-care setting. In order to encourage the widespread use of office spirometers, their specifications differ somewhat from those for diagnostic spirometers, allowing lower instrument cost, smaller size, less effort to perform the test, improved ease of calibration checks, and an improved quality-assurance program.

Publication Type: journal article

Subject Headings:
Spirometry
Primary Health Care
Health Screening
Lung Diseases, Obstructive
Risk Assessment
Smoking
False Positive Results
False Negative Results

Source: CINAHL

59. COPD: why "test your lungs, know your numbers" is the new battle cry... chronic obstructive pulmonary disease.

Citation: Consultant (00107069), 01 October 1998, vol./is. 38/10(2501-2507), 00107069

Author(s): Petty TL; Nett LM

Language: English

Abstract: A major goal of the National Lung Health Education Program, which is aimed at early detection and treatment of chronic obstructive pulmonary disease, is to have all primary care practitioners perform spirometry on smokers nd persons with respiratory symptoms to identify those with early disease. Smoking cessation is a key element in the program; options for nicotine replacement include gum, patches, spray, and a cigarette-like inhaler. Sustained-release bupropion can be used for nicotine withdrawal symptoms both intensive counseling and nicotine replacement therapy are required for the most heavily addicted smokers. Since spirometric abnormalities re surrogate markers for te four lading causes of death, widespread use could have a profound effect on health care.

Publication Type: journal article

Subject Headings:
Pulmonary Disease, Chronic Obstructive
Health Screening
Health Education
Spirometry
Physicians, Family
Education, Medical, Continuing
Program Implementation
Smoking Cessation

Forced Expiratory Volume
Spirometry
Clinical Trials
Treatment Outcomes
Adult
Middle Age
Medical Organizations
United States

Source: CINAHL

60. The accuracy of a handheld portable spirometer.

Citation: CHEST, 01 January 1996, vol./is. 109/1(152-157), 00123692

Author(s): Rebuck DA; Hanania NA; D'Urzo AD; Chapman KR

Language: English

Abstract: BACKGROUND: Objective measurement of lung function is considered essential in the management of patients with asthma and COPD. Many primary care practitioners lack the means necessary to obtain these measurements conveniently. To meet this need, electronic spirometers, offering portability, ease of operation, and timesaving readout options have been introduced. We compared the accuracy of a typical pneumotachograph-based device with a conventional volume displacement spirometer. METHODS: We compared indexes of pulmonary function (FVC, FEV1, mean forced expiratory flow during the middle half of FVC, [FEF25-75%], and peak expiratory flow rate [PEFR]) measured by the handheld device with those measured by a conventional spirometer in 75 white subjects (33 men, 42 women) with a median age of 43 years (22 to 77 years) who were either healthy or were referred to the pulmonary function laboratory of a large tertiary care teaching hospital. The order of the instrument tested first was randomized and the patients were blinded to which instrument was being studied. RESULTS: There was a linear relationship between instruments for all indexes measured ($r = 0.97, 0.98, 0.94, 0.94$ for FVC, FEV1, FEF25-75%, and PEFR, respectively, for all $p < 0.001$). The random error (precision) was within 5% only for FEV1. The mean of the differences between the values obtained using both instruments (the bias) +/- limits of agreement (+/- 2 SD) were 0.06 +/- 0.56 L for FVC ($p = NS$), 0.2 +/- 0.44 L for FEV1 ($p < 0.05$), 0.61 +/- 1.26 L/s for FEF25-75% ($p < 0.05$), and 0.44 +/- 1.9 L/s for PEFR ($p < 0.05$). CONCLUSION: Our data suggest that measurements obtained using the pneumotachograph device are closely related to those obtained by volume displacement spirometry and that the handheld device may be useful in clinical practice. However, because the limits of agreement are wide and the difference between the two instrument measurements are significant for FEV1, FEF25-75%, and PEFR, the bias between them is not consistent nor is it insignificant. Therefore, the measurements made with the two types of machine cannot be used interchangeably.

Publication Type: journal article

Subject Headings:
Spirometry
Quality of Health Care
Comparative Studies
Electronics
Equipment Design
Forced Expiratory Volume
Lung
Lung Diseases, Obstructive
Peak Expiratory Flow Rate
Sensitivity and Specificity
Medical Informatics
Single-Blind Studies
Adult
Middle Age
Aged
Male

Female
Vital Capacity
Human

Source: CINAHL

Full Text: Available in *fulltext* at *Highwire Press*