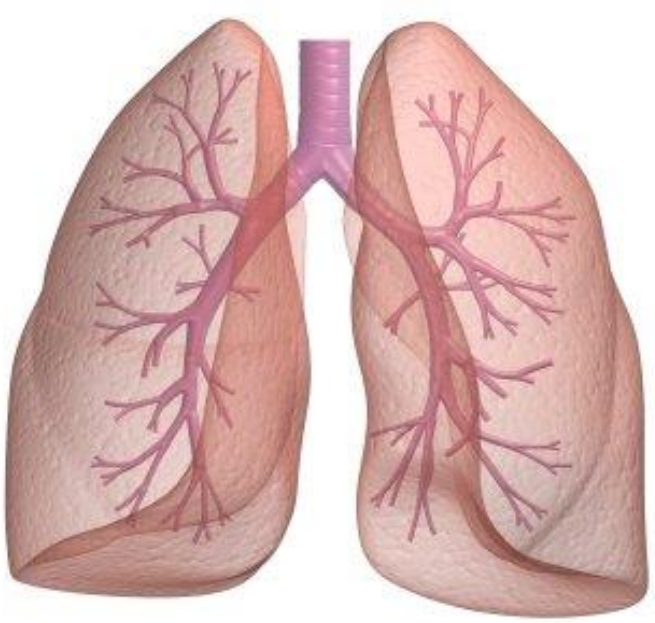
University Hospitals Bristol NHS
NHS Foundation Trust

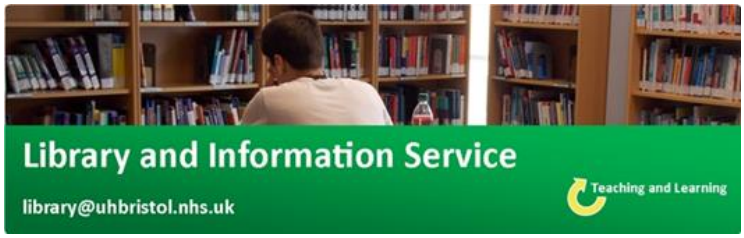
# Respiratory

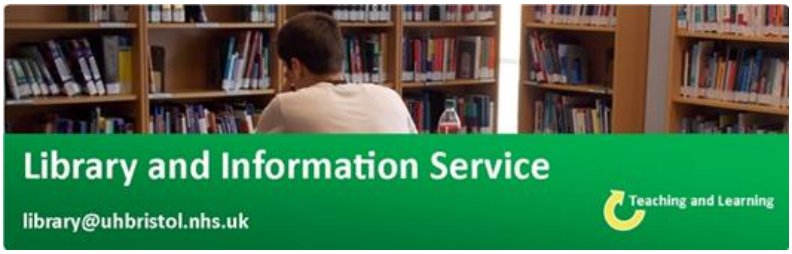
## Current Awareness Newsletter



## July 2016

Respecting everyone
Embracing change
Recognising success
Working together
**Our hospitals.**






## Outreach

Your Outreach Librarian can help facilitate evidence-based practice for all Respiratory staff, as well as assisting with academic study and research. We can help with **literature searching, obtaining journal articles and books**, and setting up individual **current awareness alerts**.

## Literature Searching

We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a 1 to 1 session where we can guide you through the process of creating a well-focused literature research and introduce you to the health databases access via NHS Evidence.

## Critical Appraisal Training

We also offer **one-to-one or small group training** in literature searching, accessing electronic journals, and critical appraisal/Statistics. These are essential courses that teach how to interpret clinical papers.

For more information, email: katie.barnard@uhbristol.nhs.uk

## Books

Books can be searched for using SWIMS our online catalogue at www.swims.nhs.uk. Books and journals that are not available on site or electronically may be requested from other locations. Please email requests to: library@uhbristol.nhs.uk

# Contents

# Tables of Contents from Respiratory journals

The links below will take you to the full Tables of Contents.

If you require full articles please email: library@uhbristol.nhs.uk

**Thorax**
July 2016, Volume 71, Issue 7

**Chest**
July 2016, Volume 150, Issue 1

**European Respiratory Journal**
July 2016, Volume 48, Issue 1

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**The 'BIG 4':**

**JAMA**
July 5, 2016, Volume 316, Issue 1

**The New England Journal of Medicine**
July 7, 2016  Volume 375, Issue 1

**The Lancet: Respiratory Medicine**
July 2016, Volume 4, Issue 7

**BMJ: Respiratory Medicine [portal]**

# Latest relevant Systematic Reviews from the Cochrane Library

Nutritional supplements for people being treated for active tuberculosis
Liesl Grobler, Sukrti Nagpal, Thambu D Sudarsanam, David Sinclair

Interventions for tobacco use cessation in people living with HIV and AIDS
Erica RM Pool, Omara Dogar, Ryan P Lindsay, Peter Weatherburn, Kamran Siddiqi

Tai Chi for chronic obstructive pulmonary disease (COPD)
Shirley PC Ngai, Alice YM Jones, Wilson Wai San Tam

Increased versus stable doses of inhaled corticosteroids for exacerbations of chronic asthma in adults and children
Kayleigh M Kew, Michael Quinn, Bradley S Quon, Francine M Ducharme

# NHS Behind the Headlines

**Teens who vape e-cigs 'six times more likely to smoke cigarettes'**
**Tuesday Jun 14 2016**
"Vaping is a gateway to smoking," the Mail Online reports, seriously overstating the evidence of a new US study. While the study did find teens who experimented with e-cigs were more likely to smoke "traditional" tobacco products…

# Upcoming Lunchtime Drop-in Sessions

The **Library and Information Service** provides free specialist information skills training for all UHBristol staff and students. To book a place, email: **library@uhbristol.nhs.uk**

If you're unable to attend we also provide **one-to-one** or **small group** sessions. Contact **library@uhbristol.nhs.uk** or **katie.barnard@uhbristol.nhs.uk** to arrange a session.

**July** (1pm)

| | |
|---|---|
| Tue 5th | **Critical Appraisal** |
| Wed 13th | **Statistics** |
| Thurs 21st | **Information resources** |
| Fri 29th | **Literature Searching** |

**August** (12pm)

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|---|---|
| Tue 2nd | **Critical Appraisal** |
| Wed 10th | **Statistics** |
| Thurs 18th | **Information resources** |
| Fri 26th | **Literature Searching** |

# New activity in Uptodate

**Glycopyrronium-indacaterol versus fluticasone-salmeterol for moderate-to-severe COPD (June 2016)**

Current guidelines suggest use of an inhaled glucocorticoid (ICS)-long-acting beta agonist (LABA) in patients with moderate-to-severe chronic obstructive pulmonary disease (COPD) who are at increased risk of exacerbations. New data suggest that long-acting anticholinergic (LAMA)-LABA combinations, which improve pulmonary function and variably reduce symptoms in patients with COPD at low risk of exacerbations, may also benefit patients at increased risk of exacerbation. In a multicenter trial, glycopyrronium-indacaterol once daily was compared with fluticasone-salmeterol twice daily in over 3000 patients with moderate-to-severe COPD and at least one moderate-severe exacerbation in the previous year [7]. Over the 52-week trial, glycopyrronium-indacaterol reduced exacerbations by 11 percent and was associated with slightly fewer episodes of pneumonia compared with fluticasone-salmeterol. The role of LAMA-LABA combinations in these patients, in preference to an ICS-LABA combination, requires further study before widespread implementation. (See "Management of stable chronic obstructive pulmonary disease", section on 'Comparison with LAMA-LABA'.)

**Screening for bleomycin-induced lung disease (June 2016)**

There has been no consensus as to the utility of serial pulmonary function tests (PFTs, including the diffusing capacity for carbon monoxide [DLCO]) to detect early signs of bleomycin-induced lung disease, and practice is variable. Data reported from the contemporary Danish Testicular Cancer database suggest that a systematic approach to assessing PFTs before and during therapy, with early discontinuation of bleomycin for those with a drop in the DLCO of 25 percent or more, resulted in very low rates of both acute and chronic lung disease, and no adverse effect on oncologic outcomes [26]. We suggest assessment of PFTs, including DLCO, at baseline prior to treatment and at intervals during therapy for most adults receiving a bleomycin-containing chemotherapy regimen for any malignancy. The optimal frequency of testing is not established. We suggest discontinuation of bleomycin if there is a decrease in the DLCO of 25 percent or more, even if asymptomatic. (See "Bleomycin-induced lung injury", section on 'Screening for lung toxicity'.)

# Current Awareness database articles

If you require full articles please email: library@uhbristol.nhs.uk

**Title:** Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial.

**Citation:** Lancet (London, England), Jun 2016, vol. 387, no. 10037, p. 2507-2520, 1474-547X (June 18, 2016)

**Author(s):** Anthenelli, Robert M, Benowitz, Neal L, West, Robert, St Aubin, Lisa, McRae, Thomas, Lawrence, David, Ascher, John, Russ, Cristina, Krishen, Alok, Evins, A Eden

**Abstract:** Substantial concerns have been raised about the neuropsychiatric safety of the smoking cessation medications varenicline and bupropion. Their efficacy relative to nicotine patch largely relies on indirect comparisons, and there is limited information on safety and efficacy in smokers with psychiatric disorders. We compared the relative neuropsychiatric safety risk and efficacy of varenicline and bupropion with nicotine patch and placebo in smokers with and without psychiatric disorders. We did a randomised, double-blind, triple-dummy, placebo-controlled and active-controlled (nicotine patch; 21 mg per day with taper) trial of varenicline (1 mg twice a day) and bupropion (150 mg twice a day) for 12 weeks with 12-week non-treatment follow-up done at 140 centres (clinical trial centres, academic centres, and outpatient clinics) in 16 countries between Nov 30, 2011, and Jan 13, 2015. Participants were motivated-to-quit smokers with and without psychiatric disorders who received brief cessation counselling at each visit. Randomisation was computer generated (1:1:1:1 ratio). Participants, investigators, and research personnel were masked to treatment assignments. The primary endpoint was the incidence of a composite measure of moderate and severe neuropsychiatric adverse events. The main efficacy endpoint was biochemically confirmed continuous abstinence for weeks 9-12. All participants randomly assigned were included in the efficacy analysis and those who received treatment were included in the safety analysis. The trial is registered at ClinicalTrials.gov (number NCT01456936) and is now closed. 8144 participants were randomly assigned, 4116 to the psychiatric cohort (4074 included in the safety analysis) and 4028 to the non-psychiatric cohort (3984 included in the safety analysis). In the non-psychiatric cohort, 13 (1·3%) of 990 participants reported moderate and severe neuropsychiatric adverse events in the varenicline group, 22 (2·2%) of 989 in the bupropion group, 25 (2·5%) of 1006 in the nicotine patch group, and 24 (2·4%) of 999 in the placebo group. The varenicline-placebo and bupropion-placebo risk differences (RDs) for moderate and severe neuropsychiatric adverse events were -1·28 (95% CI -2·40 to -0·15) and -0·08 (-1·37 to 1·21), respectively; the RDs for comparisons with nicotine patch were -1·07 (-2·21 to 0·08) and 0·13 (-1·19 to 1·45), respectively. In the psychiatric cohort, moderate and severe neuropsychiatric adverse events were reported in 67 (6·5%) of 1026 participants in the varenicline group, 68 (6·7%) of 1017 in the bupropion group, 53 (5·2%) of 1016 in the nicotine patch group, and 50 (4·9%) of 1015 in the placebo group. The varenicline-placebo and bupropion-placebo RDs were 1·59 (95% CI -0·42 to 3·59) and 1·78 (-0·24 to 3·81), respectively; the RDs versus nicotine patch were 1·22 (-0·81 to 3·25) and 1·42 (-0·63 to 3·46), respectively. Varenicline-treated participants achieved higher abstinence rates than those on placebo (odds ratio [OR] 3·61, 95% CI 3·07 to 4·24), nicotine patch (1·68, 1·46 to 1·93), and bupropion (1·75, 1·52 to 2·01). Those on bupropion and nicotine patch achieved higher abstinence rates than those on placebo (OR 2·07 [1·75 to 2·45] and 2·15 [1·82 to 2·54], respectively). Across cohorts, the most

frequent adverse events by treatment group were nausea (varenicline, 25% [511 of 2016 participants]), insomnia (bupropion, 12% [245 of 2006 participants]), abnormal dreams (nicotine patch, 12% [251 of 2022 participants]), and headache (placebo, 10% [199 of 2014 participants]). Efficacy treatment comparison did not differ by cohort. The study did not show a significant increase in neuropsychiatric adverse events attributable to varenicline or bupropion relative to nicotine patch or placebo. Varenicline was more effective than placebo, nicotine patch, and bupropion in helping smokers achieve abstinence, whereas bupropion and nicotine patch were more effective than placebo. Pfizer and GlaxoSmithKline. 

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**Title:** Predictors of Change in Dyspnea Level in Acute Exacerbations of COPD.

**Citation:** COPD, Jun 2016, vol. 13, no. 3, p. 303-311, 1541-2563 (June 2016)

**Author(s):** Garcia-Gutierrez, Susana, Quintana, José M, Unzurrunzaga, Anette, Esteban, Cristóbal, Baré, Marisa, Fernández de Larrea, Nerea, Pulido, Esther, Rivas, Paco, -Copd Group, Iryss

**Abstract:** The aim of this study was to identify factors related to changes in dyspnoea level in the acute and short-term periods after acute exacerbation of chronic obstructive pulmonary disease. This was a prospective cohort study of patients with symptoms of acute chronic obstructive pulmonary disease exacerbation who attended one of 17 hospitals in Spain between June 2008 and September 2010. Clinical data and patient reported measures (dyspnoea level, health-related quality of life, anxiety and depression levels, capacity to perform physical activity) were collected from arrival to the emergency department up to a week after the visit in discharged patients and to discharge in admitted patients (short term). Main outcomes were time course of dyspnoea over the acute (first 24 hours) and short-term periods, mortality and readmission within 2 months of the index episode. Changes in dyspnoea in both periods were related capacity to perform physical activity as well as clinical variables. Short-term changes in dyspnoea were also related to dyspnoea at 24 hours after the ED visit, and anxiety and depression levels. Dyspnoea worsening or failing to improve over the studied periods was associated with poor clinical outcomes. Patient-reported measures are predictive of changes in dyspnoea level.

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**Title:** The value of telehealth in the early detection of chronic obstructive pulmonary disease exacerbations: A prospective observational study.

**Citation:** Health informatics journal, Jun 2016, vol. 22, no. 2, p. 406-413, 1741-2811 (June 2016)

**Author(s):** Hamad, Ghassan A, Crooks, Michael, Morice, Alyn H

**Abstract:** We aim to establish the value of telemonitoring in the early detection of chronic obstructive pulmonary disease exacerbations. We followed up patients undergoing chronic obstructive pulmonary disease telemonitoring for 4 months. We studied changes in the telemonitored data in the week prior to admission or to community chronic obstructive pulmonary disease exacerbation. A total of 183 patients were studied. In all, 30 chronic obstructive pulmonary disease-related hospital admissions and 68 chronic obstructive pulmonary disease community exacerbations were recorded. Changes in telehealth parameters occurred in 80 per cent (24/30) of admissions and 82 per cent (56/68) of community exacerbations. Although changes in telehealth data occurred in the majority of exacerbations, most individual symptoms was present in less than half the exacerbations and almost 20 per cent of exacerbations were not preceded by any change in telemonitoring data. Cough created significantly more alerts by those treated in the community (p =

0.008), whereas a drop in oxygen saturation created significantly more alerts pre-hospitalisation (p = 0.049). We conclude that further work is required to develop methods of identifying impending chronic obstructive pulmonary disease exacerbations with greater sensitivity and specificity. © The Author(s) 2015.

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**Title:** Survival of smear-positive multidrug resistant tuberculosis patients in Witbank, South Africa: A retrospective cohort study.

**Citation:** Infectious diseases (London, England), Jun 2016, vol. 48, no. 6, p. 422-427, 2374-4243 (June 2016)

**Author(s):** Olaleye, Abiola O, Beke, Andy K

**Abstract:** Background A retrospective cohort study was carried out to compare the survival between smear-positive patients and smear-negative multidrug resistant tuberculosis (MDR-TB) patients hospitalised in a specialised TB hospital in Witbank, South Africa. Methods A review of medical records of MDR-TB patients treated from 2001 to 2010 was carried out. Survival time was measured from a patient's date of hospitalisation to the date when the patient died, was last treated at the hospital or the end of the study (whichever came first). All patients who were alive until the end of the study period or lost to follow-up were censored and those who died were considered as failures. Survival patterns were estimated using Kaplan Meier plots, log rank tests and life tables. Cox proportional hazards regression analyses were also conducted. Results The mean age of the 442 MDR-TB patients in the study was 37.7 ± 11.2 years. The incidence rates of mortality were 13.4 and 43.9 per 1000 person-months for smear-negative and smear-positive MDR-TB patients, respectively. Cox proportional hazard regression showed that the predictors of death among MDR-TB patients include HIV co-infection (adjusted Hazard Rate, aHR = 1.89, 95% CI = 1.02-3.52), old age (above 60 years) (aHR = 2.05, 95% CI = 1.04-3.60) and smear positivity at diagnosis (aHR = 3.29, 95% CI = 2.39-4.64). Conclusion The study showed that the probability of survival during the treatment is reduced in MDR-TB patients, who are smear-positive, HIV positive or older than 60 years. Special care should be given to these patients to improve survival.

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**Title:** Early veno-venous extracorporeal membrane oxygenation is associated with lower mortality in patients who have severe hypoxemic respiratory failure: A retrospective multicenter cohort study.

**Citation:** Journal of critical care, Jun 2016, vol. 33, p. 169-173, 1557-8615 (June 2016)

**Author(s):** Kanji, Hussein D, McCallum, Jessica, Norena, Monica, Wong, Hubert, Griesdale, Donald E, Reynolds, Steven, Isac, George, Sirounis, Demetrios, Gunning, Derek, Finlayson, Gordon, Dodek, Peter

**Abstract:** The purpose of the study is to compare outcomes in patients who had severe hypoxemic respiratory failure (Pao2/fraction of inspired oxygen <100) who received early veno-venous extracorporeal membrane oxygenation (ECMO) as an adjunct to mechanical ventilation, to those in patients who received conventional mechanical ventilation alone. This is a multicenter, retrospective unmatched and matched cohort study of patients admitted between April 2006 and December 2013. Generalized logistic mixed-effects models and Cox proportional hazards models were used to determine the association between treatment with ECMO that was started within 3 days of intensive care unit (ICU) admission and ICU and hospital mortality and length of stay, respectively. A total of 2440 patients who had severe hypoxemic respiratory failure due to various etiologies were included,

46 who received early veno-venous ECMO and 2394 unmatched and 398 matched controls who received conventional ventilation alone. Compared to matched controls, ECMO was associated with a lower odds of ICU (odds ratio [95% confidence interval], 0.30 [0.13-0.67]) and inhospital death (odds ratio 0.30 [0.14-0.67]). In addition, ECMO was associated with longer times to discharge from ICU and hospital (hazard ratio, 0.42 [0.37-0.47] and 0.53 [0.38-0.73], respectively). In this observational study, use of early ECMO compared to conventional mechanical ventilation alone in patients who had severe hypoxemic respiratory failure was associated with a lower risk of mortality and a longer length of stay. 

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**Title:** Co-morbid psychological dysfunction is associated with a higher risk of asthma exacerbations: a systematic review and meta-analysis.

**Citation:** Journal of thoracic disease, Jun 2016, vol. 8, no. 6, p. 1257-1268, 2072-1439 (June 2016)

**Author(s):** Zhang, Li, Zhang, Xin, Zheng, Jing, Wang, Lan, Zhang, Hong-Ping, Wang, Lei, Wang, Gang

**Abstract:** The longitudinal associations between psychological dysfunction (PD) and asthma exacerbations (AE) have not been adequately addressed. This study aimed to systematically assess the influence of PD on AE, and to determine whether different PD affects AE differentially. Electronic databases (PubMed, Cochrane library, Web of Science, Embase, and Ovid) were searched for prospective cohort studies on the influence of PD on AE in individuals with asthma. Relative risk (RR) and adjusted RR (RRadj) were pooled across studies. Subgroup analyses assessed the effects of different types of PD and the time-dependent response to the duration of PD exposure. Ten articles that involved 31,432 adults with asthma with follow-up of 6.0-86.4 months were included. PD significantly increased the risk of AE [RRadj =1.06, 95% confidence interval (95%CI): 1.04-1.09, P<0.001], presenting as hospitalizations (RRadj =1.22, 95% CI: 1.12-1.34, P<0.001), unscheduled doctor visits (RR =4.26, 95% CI: 2.52-7.19), and emergency department (ED) visits (RRadj =1.06, 95% CI: 1.01-1.10, P=0.009) because of asthma. Depression significantly increased the risk of AE (RRadj =1.07, 95% CI: 1.04-1.11, P<0.001), presenting as hospitalizations (RRadj =1.26, 95% CI: 1.07-1.49, P=0.007) and ED visits (RRadj =1.06, 95% CI: 1.02-1.11, P=0.007) because of asthma. Anxiety was only associated with an increased risk of AE in pregnant women (RR =1.05, 95% CI: 1.01-1.08), possibly due to the small amount of data available on anxiety. The influence of PD on AE was only significant when the PD exposure time exceeded one year. Co-morbid PD adversely affects AE, and there are differential effects of depression and anxiety. Asthmatic subjects with PD may benefit from more attention when establishing a treatment regimen in clinical practice.

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**Title:** Use of noninvasive ventilation at the pulmonary infection control window for acute respiratory failure in AECOPD patients: A systematic review and meta-analysis based on GRADE approach.

**Citation:** Medicine, Jun 2016, vol. 95, no. 24, p. e3880., 1536-5964 (June 2016)

**Author(s):** Peng, Le, Ren, Peng-Wei, Liu, Xue-Ting, Zhang, Chao, Zuo, Hong-Xia, Kang, De-Ying, Niu, Yu-Ming

**Abstract:** The aim of the study was to comprehensively examine the efficacy and safety of noninvasive ventilation used at the pulmonary infection control (PIC) window for acute respiratory failure (ARF) in patients with acute exacerbations of chronic obstructive pulmonary disease (AECOPD).Seven electronic databases and relevant resources were searched to identify randomized controlled trials (RCTs) comparing patients using noninvasive ventilation at PIC window with those

continuing receiving invasive ventilation. Retrieved citations were screened, risk of bias was assessed, and data were extracted by 2 independent review authors. Overall effect sizes were synthesized by using meta-analyses. Quality of evidence was rated by using Grading of Recommendations, Assessment, Development and Evaluation approach.A total of 17 trials involving 959 participants were included for this review. Compared with continuous invasive ventilation, noninvasive ventilation used at PIC window significantly reduced mortality, ventilator-associated pneumonia, weaning failures, reintubations, duration of invasive ventilation, total duration of mechanical ventilation, length of stay (LOS) in intensive care unit, and LOS in hospital as well as hospital costs. Of these, mortality significantly decreased (risk ratio = 0.27, 95% confidence interval: 0.17-0.42, P < 0.001) without significant heterogeneity (I = 0%, P = 0.99). Quality of evidence regarding the 9 outcomes across the included studies was rated from moderate to low.Use of noninvasive ventilation at PIC window showed beneficial effects across identified trials for ARF in AECOPD patients. Considering the absence of high quality of available evidence and the uncertainty of long-term effect of this intervention, a weak recommendation for clinical practice was generated, and further well-designed and adequately powered RCTs are required to validate this conclusion.

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**Title:** Is There any Gender Difference for Smoking Persistence or Relapse Following Diagnosis or Hospitalization for Coronary Heart Disease? Evidence From a Systematic Review and Meta-Analysis.

**Citation:** Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco, Jun 2016, vol. 18, no. 6, p. 1399-1407, 1469-994X (June 2016)

**Author(s):** Rahman, Muhammad Aziz, Edward, Karen-Leigh, Montgomery, Laura, McEvedy, Samantha, Wilson, Andrew, Worrall-Carter, Linda

**Abstract:** Persistent smoking in patients diagnosed with coronary heart disease (CHD) has a significant effect on morbidity and mortality. Although there has been considerable debate around gender differences in smoking cessation, conclusive evidence on how gender impacts rates of smoking cessation and/or relapse following CHD diagnosis is lacking. Our aim was to test the hypothesis that female smokers with CHD were more likely to persist in smoking or relapse post-diagnosis or hospitalization than male smokers. We searched PubMed and Web of Science databases for studies published in the last 10 years. Meta-analyses were conducted using a random effects model. Sixteen studies met the inclusion criteria. The aggregated sample size was 36 591, 20 617 (56%) were smokers of which 2564 (12%) were female. Meta-analyses of eight studies where smoking prevalence could be measured, showed that females were less likely to be smokers at baseline than males (OR = 0.30, 95% CI = 0.13 to 0.70). Overall, one in two (47%) smokers persisted in smoking/relapsed following a diagnosis or hospitalization for CHD; but there was no gender difference in the rate of persistent smoking/relapse (OR = 1.07, 95% CI = 0.95 to 1.21). Female smokers with CHD were relatively uncommon in the included study populations. However, the rate of persistent smoking/relapse was high in both female and male smokers following a diagnosis or hospitalization for CHD. Therefore similar, sustained smoking cessation efforts are warranted for both genders. There was no gender difference for persistent smoking/relapse following a diagnosis or hospitalization for CHD, but the rate was high in both female and male smokers. Therefore, similar, sustained smoking cessation efforts are warranted for both genders. 

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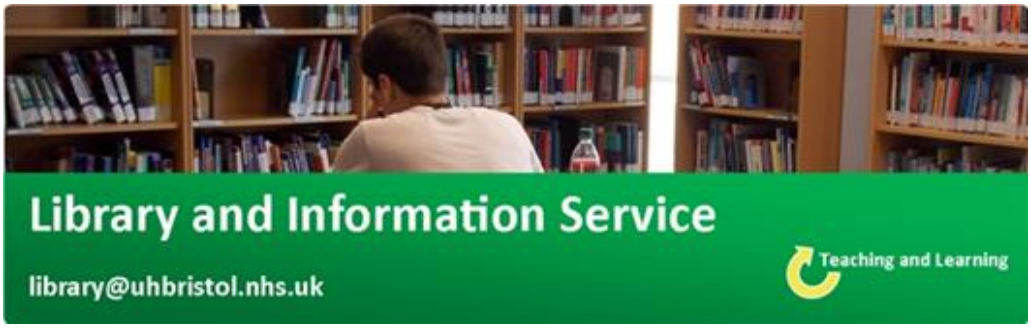
**Title:** Smoking Status at Time of Listing for a Heart Transplant Predicts Mortality on the Waiting List: A Multicenter Prospective Observational Study.

**Citation:** Progress in transplantation (Aliso Viejo, Calif.), Jun 2016, vol. 26, no. 2, p. 117-121, 1526-9248 (June 2016)

**Author(s):** Gali, Kathleen, Spaderna, Heike, Smits, Jacqueline M A, Bramstedt, Katrina A, Weidner, Gerdi

**Abstract:** We examined the association of smoking status at time of listing with waitlist mortality among heart transplant (HTx) candidates. Data were analyzed from 316 participants (aged 53 ± 11; 18% female) of the Waiting for a New Heart Study, a prospective observational study of patients newly listed for HTx at 17 hospitals. During the study period (April 2005 to March 2010), 14% of those who never smoked died, 18% among former smokers died, and almost half (42%) died among those who reported smoking at time of wait listing. Multivariate Cox regression models controlling for age, sex, and disease severity revealed smoking at time of listing was associated with significantly higher risk of mortality compared to never smoking (hazard ratio [HR] = 3.43; P = .03). The relationship between smoking and mortality risk appeared to follow a dose-dependent pattern: adjusted HRs were 1.80 for those who quit ≤1 year ago, 1.25 for those who quit >1 to 10 years ago, and 0.90 for those quit >10 years ago, compared to never smokers. Smoking at time of listing may increase risk of mortality during the waiting period, indicating the need for improved strategies to achieve smoking cessation as early as possible in the course of HTx. 




# The Library

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