

ARIC Manuscript Proposal # 1355

PC Reviewed: 04/08/08
SC Reviewed: _____

Status: A
Status: _____

Priority: 2
Priority: _____

1.a. Full Title: Race-Specific Associations of All-Cause Mortality with Chronic Obstructive Pulmonary Disease in the Atherosclerosis Risk in Communities (ARIC) Study

b. Abbreviated Title (Length 26 characters): COPD and Mortality in ARIC

2. Writing Group:

Writing group members: Alanna Chamberlain, MPH
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I, the first author, confirm that all the coauthors have given their approval for this manuscript proposal. AMC [please confirm with your initials electronically or in writing]

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3. Timeline:	Statistical Analysis:	March 2008 – April 2008
	Manuscript Preparation:	April 2008
	Manuscript Revision:	May 2008
	Manuscript Submission:	May 2008

4. Rationale:

Chronic obstructive pulmonary disease (COPD) encompasses chronic bronchitis and emphysema.¹ Symptoms of COPD include wheezing, dyspnea, sputum production, airflow obstruction, decreased expiratory flow, loss of lung elasticity, hyperinflation, and inflammatory narrowing of airways due to infiltration by neutrophils, macrophages, and CD8-positive T cells.^{1,2,3} COPD is the fifth leading cause of death worldwide.¹ As of 1999, COPD accounted for 5.1% and 4.8% of deaths the U.S. in men and women, respectively.⁴ Among COPD patients participating in an international multi-center trial, the specific causes of death were as follows: respiratory (35%), cardiovascular (27%), cancer (21%), and other/unknown (18%).⁵

The long-term mortality among individuals with COPD has been described in several studies, although most included only white individuals. For example, in a cohort of 1,999 men from Norway, subjects with stage I and II COPD as described by the Global Initiative for Chronic Obstructive Lung Disease had significantly higher all-cause mortality over 26 years of follow-up compared to individuals without COPD.⁶

Racial differences in all-cause mortality in COPD patients have not been previously described. Therefore, we propose to examine race-specific all-cause mortality by presence and severity of COPD within the ARIC cohort.

References:

1. Pauwels PRA, Rabe KF. Burden and clinical features of chronic obstructive pulmonary disease (COPD). *The Lancet*. 2004;8/14;364:613-620.
2. De Palo VA. Pulmonary disease: Pneumonia, chronic obstructive pulmonary disease, asthma, and thromboembolic disease. *J Am Podiatr Med Assoc*. 2004;94:157-167.
3. Snoeck-Stroband JB, Postma DS, Lapperre TS, et al. Airway inflammation contributes to health status in COPD: A cross-sectional study. *Respir Res*. 2006;7:140.
4. Kazerouni N, Alverson CJ, Redd SC, et al. Sex differences in COPD and lung cancer mortality trends – United States, 1968-1999. *J Women's Health*. 2004;13(1):17-23.
5. McGarvey LP, John M, Anderson JA, et al. Ascertainment of cause-specific mortality in COPD: operations of the TORCH clinical endpoint committee. *Thorax*. 2007;62:411-415.
6. Stavem K, Sandvick L, Erikssen J. Can global initiative for chronic obstructive lung disease stage 0 provide prognostic information on long-term mortality in men? *Chest* 2006;130:318-325.

5. Main Hypothesis/Study Questions:

We hypothesize that all-cause mortality rates among blacks and whites in the ARIC cohort will show a significant negative association with categories of COPD at baseline.

6. Design and analysis (study design, inclusion/exclusion, outcome and other variables of interest with specific reference to the time of their collection, summary

(This file ICTDER02 has been distributed to ARIC PIs, and contains the responses to consent updates related to stored sample use for research.)

8.a. Will the DNA data be used in this manuscript? ☐ Yes
☒ No

8.b. If yes, is the author aware that either DNA data distributed by the Coordinating Center must be used, or the file ICTDER02 must be used to exclude those with value RES_DNA = "No use/storage DNA"?
☐ Yes ☐ No

9. The lead author of this manuscript proposal has reviewed the list of existing ARIC Study manuscript proposals and has found no overlap between this proposal and previously approved manuscript proposals either published or still in active status. ARIC Investigators have access to the publications lists under the Study Members Area of the web site at: <http://www.cscce.unc.edu/ARIC/search.php>

☒ Yes ☐ No

10. What are the most related manuscript proposals in ARIC (authors are encouraged to contact lead authors of these proposals for comments on the new proposal or collaboration)?

MS # 850: Low lung function, lung function decline, and hospitalizations in the Atherosclerosis Risk in Communities Study

11. a. Is this manuscript proposal associated with any ARIC ancillary studies or use any ancillary study data? ☐ Yes ☒ No

11.b. If yes, is the proposal

- ☐ A. primarily the result of an ancillary study (list number* ☐)
☐ B. primarily based on ARIC data with ancillary data playing a minor role (usually control variables; list number(s)*
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*ancillary studies are listed by number at <http://www.cscce.unc.edu/aric/forms/>

12. Manuscript preparation is expected to be completed in one to three years. If a manuscript is not submitted for ARIC review at the end of the 3-years from the date of the approval, the manuscript proposal will expire.