

ARIC Manuscript Proposal # 1528

PC Reviewed: 6/2/09
SC Reviewed: _____

Status: A
Status: _____

Priority: 2
Priority: _____

1.a. Full Title: Concordance of heart failure diagnostic codes comparing medical records and Medicare administrative claims in ARIC cohort participants

b. Abbreviated Title (Length 26 characters): Heart failure code concordance

2. Writing Group:

Writing group members: Mark Massing, Niantao Jiang, Gina Andrews, Wayne Rosamond, Gerardo Heiss, Lloyd Chambless

I, the first author, confirm that all the coauthors have given their approval for this manuscript proposal. _MM_ [please confirm with your initials electronically or in writing]

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ARIC author to be contacted if there are questions about the manuscript and the first author does not respond or cannot be located (this must be an ARIC investigator).

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3. Timeline: 4/1/2009-10/1/2009 Analysis
6/5/2009 Abstract Submission
9/1/2009 First Draft Manuscript
11/1/2009 Manuscript Submitted

4. Rationale: The identification heart failure cases from retrospective review of medical data is challenging and complicated by the limitations of various data sources. Hospital medical records provide the most detailed data available, but obtaining these data require substantial technical and human resources for medical record abstraction. This is especially true since many hospitals have yet to fully implement electronic medical records. Administrative claims data, derived from the medical record, are more easily accessible in electronic format for research purposes. The translation of medical record information to into claims data is driven by financial motivations that may not align with the desires of researches attempting to use these data for case definition. Nevertheless, researchers are increasingly using administrative claims as a sole source for heart failure research. Potential errors and biases in this approach are not well understood in the general population of patients with heart failure.

5. Main Hypothesis/Study Questions:

Study Questions:

1. To what extent is there agreement among heart failure diagnostic codes found in ARIC cohort hospital records with those found in linked Medicare claims.
2. Where disagreement exists, what are the sources of this disagreement?

Hypotheses: This is a descriptive study with no specific hypotheses to be tested.

6. Design and analysis (study design, inclusion/exclusion, outcome and other variables of interest with specific reference to the time of their collection, summary of data analysis, and any anticipated methodologic limitations or challenges if present).

In order to better understand the strengths and limitations of the use of Medicare claims data to identify heart failure cases, we will examine the concordance between ARIC cohort hospital surveillance data and linked Medicare claims for the years 2003-5. We will compare ICD-9-CM codes associated with heart failure from the two data sources describe potential sources of disagreement.

Inclusion/Exclusion Criteria:

ARIC cohort members included must meet the following criteria for at least one year in 2003-5.

1. Must be alive.
2. At least 65 years of age.
3. Enrolled in Medicare Part A for the full year.
4. Not enrolled in Medicare managed care.
5. Must not be lost to follow-up.

Variables of interest:

Variables from CMS data sets:

BID (CMS beneficiary ID)

INHMO (Derived variable: whether beneficiary is in HMO any time during a year)

BothAB (Derived variable: whether beneficiary had both Part A and Part B coverage for the whole year)

PRVDRSRL (MedPAR Provider Number Serial Code)

IPHF&yr._aric (Derived variable: Whether beneficiary's MedPAR diagnosis codes contain ARIC HF screening codes for a specific year)

Variables from ARIC CEL data set:

CELb02 (ARIC cohort ID)

CELB04 (Date of discharge or death)

CELB06 (Is this event a death)

CELB07 (Is this event an out-of-hospital death, or a death for which hospitalization information cannot be located?)

CELB08A (Hospital Code Number)

CELB08A1 (Hospital Name)

CELB08A2 (City and State)

CELB08B (Can information on this hospitalization be located?)

CELb10a--CELb10u (Hospital discharge diagnosis and procedure codes)

CELB11F (Is a 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 415.0, 416.9, 425.4, 428, 518.4, 786.0 code listed?)

CELB15C (Needs hospitalized HF abstraction)

CELhfcsc&yr (Derived Variable: Whether cohort member's Discharge diagnosis and procedure codes contain ARIC HF screening codes for a specific year)

7.a. Will the data be used for non-CVD analysis in this manuscript?

____ Yes ☒ No

b. If Yes, is the author aware that the file ICTDER03 must be used to exclude persons with a value RES_OTH = "CVD Research" for non-DNA analysis, and for DNA analysis RES_DNA = "CVD Research" would be used? ____ Yes ____ No
(This file ICTDER03 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 ICTDER03 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.csc.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)?

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)* _____)**

*ancillary studies are listed by number at <http://www.csc.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.