Full Title: Are the use of anti-hypertensive medications among the ARIC cohort in agreement with the Joint National Committee guidelines on hypertension?

Abbreviated Title: Trends in Anti-Hypertensive Medications

Writing Group Members (list individual with lead responsibility first):
Jennifer Briley, PharmD
Wayne Rosamond, PhD
Bruce M. Psaty, MD, PhD
John A. Pieper, PharmD
Fred Eckel, RPh
Chin-Hua Wang, PhD

Contact Information for Lead Author:
Lead: Jennifer Lee Briley, Pharm.D.
Address:
University of North Carolina at Chapel Hill
137 East Franklin Street
Bank of America Center, Suite 306
Chapel Hill, NC 27514-3628
Phone: (919) 966 – 1967
Fax: (919) 966 - 9800
Email: jbriley@email.unc.edu


Rationale:
Diabetes and hypertension are worldwide health problems. There are close associations between diabetes mellitus and hypertension, and their coexistence markedly increases morbidity and mortality. Disagreement among whether diuretics and beta-blockers cause significant adverse effects on carbohydrate and lipid metabolism exists in the literature, therefore angiotensin-converting-enzyme inhibitors (ACEI) have been recommended as first-line treatment, particularly among diabetics with proteinuria. Despite these recommendations, there have been few pharmacoepidemiologic studies examining the prescribing patterns among patients with hypertension and diabetes in the general public. Such data are important in establishing any discrepancy between recommended guidelines and treatments being prescribed in the community.
Main Hypothesis/Study Questions:
Are angiotensin-converting-enzyme inhibitors being prescribed more among patients with: hypertension and diabetes mellitus, or patients with hypertension alone?

Is the prescribing pattern among hypertensive patients in the ARIC cohort consistent with the Joint National Committee guidelines on hypertension?

Data (variables, time window, source, inclusions/exclusions):

- **Variables**: Antihypertensive medications (main exposure variable) – ACEI, CCB, BB, and diuretics
- **Covariates/Effect Modifiers**: Age, gender, race, center, SES, BP, BMI, SCr, DM, other comorbidities
- **Time Window**:
  - Visit II (1990 – 1992)
- **Source**: Hypertensive patients, Hypertension patients with Diabetes Mellitus (unable to identify DM with proteinuria in ARIC cohort)
- **Exclusions**:
  - Prevalent or missing information on CHD, History of TIA/CVA, Hyperkalemia defined as $K^+ > 5.7$ mEQ/L
  - We are unable to exclude patients from the ARIC cohort with: hypersensitivity to certain medications

Will the data be used for non-CVD analysis in this manuscript? No

Will the DNA data be used in this manuscript? No

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. JARIC Investigators have access to the publications lists under the Study Members Area of the web site at: [http://bios.unc.edu/units/cscc/ARIC/stdy/studymem.html](http://bios.unc.edu/units/cscc/ARIC/stdy/studymem.html)? Yes

References:
