ARIC MANUSCRIPT PROPOSAL #647

PC Reviewed: 02/19/99 **Status: Approved** **Priority: 1**
SC Reviewed: **Status: ____** **Priority: _____**

1. Title

Relationship of the components of blood pressure to indicators of subclinical cardiovascular disease and clinical events

2. Writing Group

Lead: Herman A. Taylor,Jr.
The Jackson Heart Study
Jackson Medical Mall
Jackson, MS 39213

Other members: A Brown, C Burchfiel, D Jones , T Skelton, D Arnett, T Clemmons, R Garrison, CSCC Representative

3. Timeline

Submit to Publications Committee	January 1999
Complete analysis	May 1999
Submit 1st draft to PC	August 1999
Submit to journal	January 2000

4. Rationale

Emerging evidence suggests that pulse pressure (PP) may be the most critical component of blood pressure (BP) for prediction of CHD risk. In data recently presented from the Framingham Study, PP was more strongly associated with CHD than systolic or diastolic BP. These data were obtained from a predominantly Caucasian cohort , who were free of CHD and were not treated for hypertension at baseline. The Jackson ARIC Cohort offers the opportunity to explore these relationships in an all AA cohort drawn randomly from a population characterized by a high rate of hypertension Brelated target organ damage and the highest CHD mortality in the US. Importantly, measures of subclinical disease have also been obtained in the overall ARIC cohort, allowing detection of asymptomatic but clinically important precursors to manifest disease.

5. Hypotheses

A. Among hypertensives (Visit 1 baseline BP>=140/90 or on antihypertensives), PP will predict incidence of CHD , TIA, stroke , and peripheral vascular disease.

B. The association of PP with CV disease will be stronger than that of diastolic or systolic BP among hypertensives.

C. Evidence of subclinical disease will be related to PP in hypertensive individuals.

D. Among non-hypertensives with SBP<140, CV disease incidence will increase with widening PP-s.

E. Among treated hypertensives, reduced PP will be associated with lower RR for subclinical and clinical disease.

F. LV mass will be related to PP (assessed among the Jackson cohort only)

6. Data

Baseline (Visit 1) BP: mean BP systolic, diastolic, PP; BP medications; HR, anthropometry , ECG-LVH,other CV risk factors(eg smoking , lipids, alcohol, glucose intolerance,etc)

Carotid US (Visits 1 & 2 for whole sample, plus V3 &V4 for Jackson & Forsyth); urine albumin(Visit 4); Retinal photography (Visit 3); echo LV mass parameters; aortic and mitral valve doppler assessment;aortic diameter & Ca++ ; arterial distensibility(at V1 and V2) cerebral MRI(V3);ABI (at V1 and V3)

Vascular events (eg surveillance angina /MI/TIA/ Stroke/peripheral vascular dz hospitalizations ; new ECG findings diagnostic of MI) ; cardiovascular and total mortality