Supplementary Data

Supplementary Table 2: Process of Identification of Incident cardiovascular Events in the ARIC Study

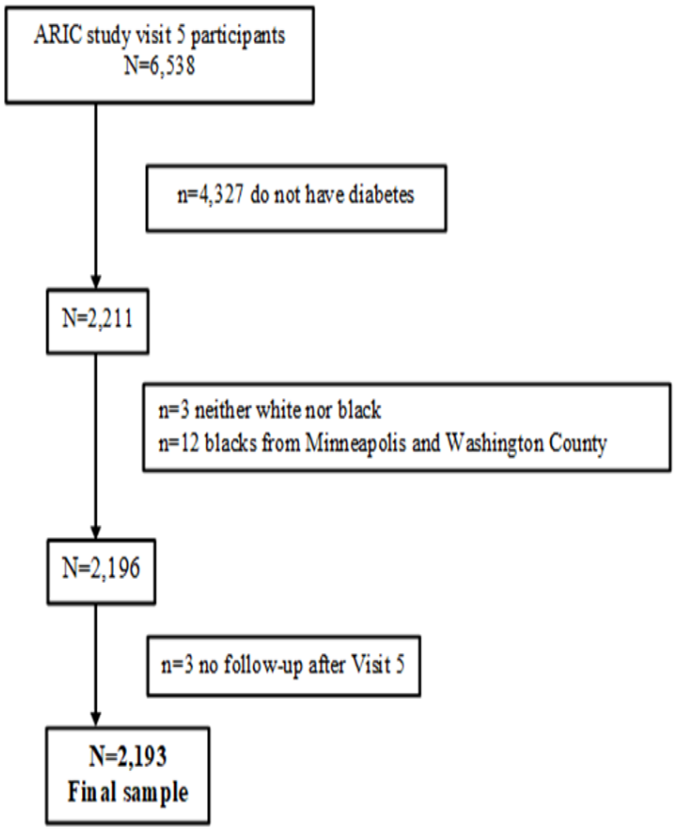
Events	ICD codes used for case identification in hospital records		Adjudication by a physician reviewers panel
	ICD9 codes	ICD-10 codes	Criteria
Coronary heart disease death	250, 401, 402, 410-414, 427-429, 440, 518.4, 798, 799 (years 1987-1998)	E10-14, I10-11, I21-25, I46-51, I70, I97, J81, J96, R96, R98-99 (years 1999 and after)	A computer algorithm and study physician categorize all possible incident coronary heart disease death; an additional study reviewer adjudicates discrepancies
Hospitalized myocardial infraction	402, 410-414, 427, 428, 518.4	I11.x, I20.x, I21.x, I22.x, I24.x, I25.x, I46.x, I47.x, I48.x, I49.x, I50.x, J81.0, R00.1	A computer algorithm and study physician categorize all possible incident myocardial infarction events; an additional study reviewer adjudicates discrepancies.
Stroke	430 to 436	I60 to I64 and G45	Based on National Survey of Stroke criteria (1), a computer algorithm and study physician categorize all possible incident stroke events; an additional study reviewer adjudicates discrepancies.
Heart Failure	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.x, 518.4, 786.0x	-	The criteria used where the Framingham (2), Modified Boston (3), NHANES I (4), and Gothenburg (5). Hospitalizations with any disagreement between the above four criteria are reviewed. Two independent reviewers base classification of heart failure (HF) on clinical judgment. A third reviewer adjudicates differences. The resulting clinical judgment classification is definite HF, Possible HF, HF unlikely, or unclassifiable HF.
Atrial Fibrillation/Flutter	427.3	I48	Events certification done by physicians-

ICD: International Classification of Diseases.
The ICD codes are used for case identification from the participants' hospital record/death certificate, followed by an adjudication by an ARIC review panel using the relevant criteria.

Supplementary Table 2: Echocardiographic characteristics of ARIC study participants with diagnosed diabetes (visit 5, 2011-2013) by history of severe hypoglycemia*

Indices of cardiac structure/function	No hypoglycemia	Hypoglycemia	p-value
N (%)	2115 (96.4)	79 (3.60)	
Left ventricular structure indices			
LVEDD, cm	4.5 (0.5)	4.6 (0.7)	0.095
IVS, cm	1.1 (0.2)	1.1 (0.2)	0.036
Mean wall thickness, cm	1.0 (0.1)	1.1 (0.1)	0.034
LV mass, g	159.5 (47.8)	178.7 (65.5)	0.003
RWT	0.4 (0.1)	0.4 (0.1)	0.64
LVH, n (%)	137 (7.2)	6 (10.3)	0.37
Systolic function			
LVEF, %	64.9 (7.1)	61.2 (11.7)	<0.001
LVEDV, mL	85.2 (26.0)	98.9 (47.4)	<0.001
LVESV, mL	30.8 (15.0)	42.3 (39.5)	<0.001
GLS, %	-17.5 (2.7)	-16.7 (3.4)	0.021
RV FAC	0.5 (0.1)	0.5 (0.1)	0.007
Diastolic function			
LA volume, mL	51.1 (19.4)	56.7 (21.2)	0.029
E wave, cm/s	69.2 (20.4)	70.5 (26.0)	0.64
E-A ratio	0.8 (0.3)	0.9 (0.6)	0.062

Data are mean (standard deviation) or number (percentage), *participants include those with heart failure.
IVS, interventricular septum; LA, left atrial; LVEDD, left ventricular end-diastolic diameter; LVEDV, left ventricular end-diastolic volume; LVEF, left ventricular ejection fraction; LVESV, left ventricular end-systolic volume; LVH, left ventricular hypertrophy; RV FAC, right ventricular fractional area change; RWT, relative wall thickness



Supplementary Figure 1. Process for selecting ARIC study visit 5 participants to examining the association of severe hypoglycemia and cardiovascular outcomes

References

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