

Supplementary material

Socioeconomic position and risk of atrial fibrillation:

A nationwide Danish cohort study

Authors:

Elin Danielsen Lunde^{1,2,6*}, Albert Marni Joensen¹, Søren Lundbye-Christensen^{2,3}, Kirsten Fonager^{4,7}, Søren Paaske Johnsen⁵, Mogens Lytken Larsen^{1,6}, Martin Berg Johansen³, Sam Riahi^{1,2,7}

Affiliations:

1) Department of Cardiology, Aalborg University Hospital, Aalborg, Denmark, 2) Aalborg AF Study Group, Aalborg University Hospital, Aalborg, Denmark, 3) Unit of Clinical Biostatistics, Aalborg University Hospital, Aalborg, Denmark, 4) Department of Social Medicine, Aalborg University Hospital, Aalborg, Denmark, 5) Danish Center for Clinical Health Services Research, Department of Clinical Medicine, Aalborg University, Aalborg, Denmark, 6) Danish Centre against Inequality in Health (DACUS), Department of Cardiology, Aalborg University Hospital, Aalborg, Denmark, 7) Department of Clinical Medicine, Aalborg University, Aalborg, Denmark

Address:

Aalborg University Hospital, Hobrovej 18-22, 9000 Aalborg, Denmark

*Corresponding author:

Elin Danielsen Lunde, e-mail: e.lunde@rn.dk, phone: +45 52746598

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Table S1. ISCED-2011 and corresponding Danish levels.

ISCED-2011 level	ISCED-2011 Program Name (English)	Danish level	Danish program name (Danish)
0	Early childhood education ('less than primary' for educational attainment)	0	"Førskole" "Vuggestuer, Børnehaver"
1	Primary education	10	"Grundskole"
2	Lower secondary education	10	"Grundskole"
3	<u>Upper secondary education</u>		
	General upper secondary education	20	"Almengymnasiale uddannelser (stx, hf)"
	General upper secondary education	25	"Erhvervsgymnasiale uddannelser (hvx, htx)"
	Vocational education and training	35	"Erhvervsfaglige praktik og hovedforløb (eud)"
4	Post-secondary non-tertiary education	%	No corresponding Danish level exists
5	Short-cycle tertiary education	40	"Korte videregående uddannelser (Erhvervsakademi)"
6	<u>Bachelor's or equivalent level</u>		
	Bachelor decree, but not necessarily from the university.	50	"Mellemlange videregående uddannelser"
	Bachelor degree from the university	60	"Bachelor"
7	Master's or equivalent level	65	"Lange videregående uddannelser"
8	Doctoral or equivalent level	70	"Forsker uddannelser"

Translation from Danish levels to ISCED are based on "The Structure of the European Education Systems 2015/16" [1].

Table S2. Distribution of education (ISCED and corresponding Danish levels) in each age group (%)

ISCED-2011 level	Danish level	35 years	50 years	65 years	80 years
0	0	2 %	1 %	2 %	48 %
1 and 2	10	22 %	29 %	48 %	33 %
3	20	5 %	3 %	1 %	1 %
3	25	2 %	2 %	0 %	0 %
3	35	41 %	41 %	33 %	12 %
4	-				
5	40	5 %	2 %	2 %	1 %
6	50	14 %	17 %	10 %	3 %
6	60	1 %	0 %	0 %	0 %
7	65	7 %	6 %	3 %	2 %
8	70	1 %	1 %	0 %	0 %

Table S3 Division of education (Danish levels) based on Table S2

Age	35	50	65	80
Low	0, 10, 20, 25	0, 10, 20, 25	10	0
Middle	35, 40, 50	35, 40, 50	20, 25, 35, 40	10, 20, 25, 35, 40
High	60, 65, 70	60, 65, 70	50, 60, 65, 70	50, 60, 65, 70

We chose to divide education based on the distribution in Table S3. By doing so, we could balance the proportions in each group over time, and at the same time partly take into account that low and high education is not the same for a person born in e.g. 1920 versus 1970.

Table S4. ICD- an ATC-codes used to define co-morbidity and outcome

Diagnosis	Definition	ICD- and/or ATC-codes
Atrial fibrillation ¹	Defined from diagnosis	ICD-8: 42793, 42794 ICD-10: I48
Congestive heart failure or cardiomyopathy ²	Defined from diagnosis and treatment	ICD-8: 42709, 42710, 42711, 42719, 42899, 78249 ICD-10: I50, I110, I130, I132, I42, J81 ATC: C03C
Previous stroke (hemorrhagic or ischemic) ³	Defined from diagnosis	ICD-8: 430, 431, 432, 433, 434 ICD-10: I60, I61, I62, I63, I64
Ischemic heart disease including myocardial infarction ⁴	Defined from diagnosis	ICD-8: 41009, 41099, 41109, 41199, 41209, 41299, 41309, 41399, 41409, 41499 ICD-10: I20-I25
Valvular heart disease ⁵	Defined from diagnosis	ICD-8: 394, 395, 396, 397, 4240, 4241 ICD-10: I05, I06, I07, I08, I09, I34, I35, I36, I37, Z95.2, Z95.3
Diabetes mellitus type I or II ⁶	Defined from diagnosis or treatment	ICD-8: 249, 250 ICD-10: E10, E11 ATC: A10
Peripheral artery disease ⁷	Defined from diagnosis	ICD-8: 44390, 44500, 44509, 44590, 44599, , 44020, 44030 ICD-10: I70.2, I70.8, I70.9, I71, I73.9
Hypertension ⁸	Defined from diagnosis or treatment: Treatment with minimum two different classes of antihypertensive drugs or at least one anti-hypertensive combination drug or one ICD-code.	ICD-8: 400, 401, 402, 403, 404 ICD-10: I10, I11, I12, I13, U15 ATC: <i>Antiadrenergic</i> : C02A, C02B, C02C <i>Non-loop diuretics</i> : C02DA, C02L, C03A, C03B, C03D, C03E, C03X, C07C, C07D, C08G, C09BA, C09DA, C09XA52, <i>Vasodilators</i> : C02DB, C02DD, C02DG, C04, C05 <i>Beta blockers</i> : C07 <i>Calcium channel blockers</i> : C07F, C08, C09BB, C09DB <i>Renin-angiotensin system inhibitors</i> : C09

		<i>Antihypertensive combination drug: C09BB04, C09DA, C09DB, C09DX01, C09DX04, C07B</i>
Renal disease (chronic kidney disease) ⁹	Defined from diagnosis	ICD-8: 7531, 403, 404, 580-584, 59009, 59319, 59320, 792, 24902, 25002 ICD-10: N00-N05, N07-N08, N11-N12, N14, N15.8, N16.0, N16.2, N16.3, N16.4, N16.8, N17-N19, Q61, I12, I13, E102, E112, E132, E142
Chronic obstructive pulmonary disease ¹⁰	Defined from diagnosis	ICD-8: 49000, 49009, 491 ICD-10: J41, J42, J43, J44
Congenital heart disease	Defined from diagnosis	ICD-8: 746 ICD-10: Q20-Q24 I4242A
Obesity ¹¹	Defined from diagnosis	ICD-8: 17799 ICD-10: E65, E660, E661, E662, E668, E669
Alcohol use ¹¹	Defined from diagnosis	ICD-8: 291, 30309, 30319, 30320, 30328, 30329, 30390, 57110, 57301, 57710 ICD-10: F10, G312, K292, K79, Z714, O354, I426, G621, G721, K860, E244
Hyperthyroidism	Defined from diagnosis or treatment	ICD-8: 242 ICD-10: E05 ATC: H03B

ICD8: 8th revision of the International Classification of Diseases system

ICD10: 10th revision of the International Classification of Diseases system

ATC: Anatomical Therapeutic Chemical Classification System

¹The validity of the combined diagnosis of atrial flutter and AF is high but low for AF/atrial flutter specified; the positive predictive value (PPV) of the combined diagnosis of AF and/or atrial flutter was 92.6% (95% CI 88.8% to 95.2%). The PPV of the specified diagnosis of AF was 57.5% for men and 29.6% for women [2].

²The diagnosis code I50 of Heart Failure in the Danish National Patient Registers has been

validated; specificity of 99% and a sensitivity of 29%. The PPV was 81%, the negative predictive value (NPV) was 90%. Hence, it is underreported, but very specific [3]. Therefore, some additional codes (J81, I13.0, I132 and I42) were included, but a prescription of a loop diuretics were required to be claimed to increase the likelihood of the heart failure diagnosis (ACE-inhibitor is unspecific as it often may be used in treatment for hypertension).

³The validity of acute stroke (ICD-10 codes I61, I63 and I64) in the Danish National Patient Registry is moderate: Sensitivity 79 %, PPV 79 %, NPV 72 %. In these analyses we were not specifically interested in ischemic stroke and included additionally ICD-codes for hemorrhagic stroke as well [4].

⁴PPV for discharge diagnosis angina pectoris and AMI was >90 %. Sensitivity, specificity and negative predictive value were not be calculated [5]. Other studies have found lower validity [6]. We also included additional ICD-codes e.g. I25; chronic ischemic heart disease.

⁵ PPV for mitral and aortic valve disease was >90 %. Sensitivity, specificity and NPV were not be calculated [5].

⁶Diabetes I and II: As many cases of diabetes mellitus are treated by general practitioners and therefore not included in hospital registries, we also included people with a prescription of glucose lowering drugs as previously suggested [7].

⁷The validity of the peripheral artery disease diagnosis is low; more than 30% of the diagnoses of PAD in the Danish National Patient Registry were not valid [8].

⁸The definition of hypertension with antihypertensive drugs has been validated and it had a PPV of 80% and specificity of 94.7% [9].

⁹The validity of moderate to severe renal disease (ICD-10 I12; I13; N00-N05; N07; N11; N14; N17-N19; Q61) has been validated and is high (PPV 100 %) but is probably underreported [10]. We have included extra ICD-10 codes as demonstrated but not validated before [11].

¹⁰The validity of the chronic obstructive pulmonary disease (COPD) diagnosis J44 is high (PPV 92 %) but underreported. Therefore, we also included the diagnosis J41, J42, J43 which is relevant COPD codes although probably not as specific as J44 [12].

¹¹Alcoholism and obesity is probably very unspecific and underreported. However, it is likely that the most severe cases are registered.

Table S5. Division of place of residence based on municipality

The grouping is based on 14 different indicators such as geographic location, urbanization, the importance of agriculture and economic situation [13,14]

Peripheral (16)	Rural (30)	Suburban/intermediate (17)	Urban (35)
Bornholm Langeland Lemvig Lolland Læsø Morsø Norddjurs Ringkøbing-Skjern Samsø Skive Struer Thisted Tønder Varde Vesthimmerland Ærø	Aabenraa Assens Billund Brønderslev- Dronninglund Esbjerg Faaborg-Midtfyn Fanø Frederikshavn Guldborgsund Haderslev Hedensted Herning Hjørring Holstebro Ikast-Brande Jammerbugt Kalundborg Kerteminde Mariagerfjord Nordfyns Nyborg Odsherred Randers Rebild Svendborg	Favrskov Faxe Fredericia Halsnæs Holbæk Horsens Ishøj Middelfart Næstved Odder Ringsted Silkeborg Slagelse Sorø Stevns Tårnby Vejl	Albertslund Allerød Ballerup Brøndby Dragør Egedal Fredensborg Frederiksberg Frederikssund Furesø Gentofte Gladsaxe Glostrup Greve Gribskov Helsingør Herlev Hillerød Hvidovre Høje-Taastrup Hørsholm Kolding København Køge Lejre Lyngby-Taarbæk

	Syddjurs Sønderborg Vejen Viborg Vordingborg		Odense Roskilde Rudersdal Rødovre Skanderborg Solrød Vallensbæk Aalborg Århus
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Tables and supplementary S6. Choice of confounders and mediators

Confounders were evaluated prior to all analysis by reviewing the literature and by discussion in the author group. Some associations were not possible to find in the literature e.g. “is heart failure associated with lower income?” Although we could not identify any studies on that, it is reasonable to believe, that a heart failure diagnosis will affect working ability and consequently the respective income. Hence, possible confounders were defined a priori based on reviewing the literature and probability. We do not want to adjust for covariates which could be part of the causal pathway linking socioeconomic factors to AF.

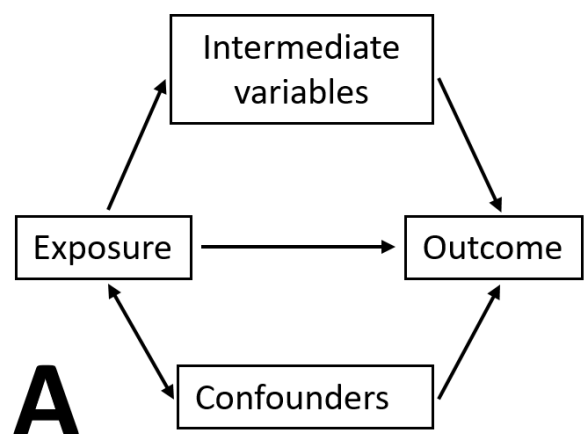
First, we identified all possible AF risk factors. Hereafter, we plotted the AF risk factors in a table, and evaluated the likelihood of it being a confounder or mediator, based on Figure A to the right.

AF risk factors

AF is a complex condition with a wide range of known and potential contributing risk factors and it is beyond the scope of this study to include all known or possible risk factors for AF. We have identified following risk factors:

- Age [15]
- Male sex [15]
- Hypertension [15]
- Heart failure [15]
- Valvular heart diseases [15]
- Diabetes mellitus [16]

Intermediate variables are not adjusted for in the models as they are considered part of the causal pathway linking the specific SEP indicator to AF.



Potential confounders are adjusted for in the models as they may also increase the likelihood of exposure and consequently cause a spurious association with SEP and AF.

- Ischemic heart diseases [16]
- Peripheral artery disease [17]
- Hyperthyroidism [18]
- Chronic Obstructive Pulmonary Disease (COPD) [19]
- (Chronic) renal disease [20]
- Alcoholism [21]
- Obesity [21]
- Congenital Heart disease [22]
- Place of residence [23,24]
- Cohabiting status [23]

Education

Table A: Possible intermediate variables and potential confounders

Variable (AF risk factors)	Potential intermediate variable: <i>Does low education (exposure) increase the risk of the variable?</i>	Potential confounder: <i>Does the variable increase the risk of low education (exposure)</i>	Confounder?	To be adjusted for?
Age	No	People of old age is less likely to be educated because long education was more uncommon before.	Yes	Stratify
Male sex	No	It is likely that men in the highest age cohort are higher educated than women, while this gender difference may be attenuated in the younger age cohort.	Yes	Stratify
Place of residence	Probably yes	Probably yes [13]	Probably yes	Yes
Cohabiting status	Perhaps	Probably yes. People are often influenced by people they live with.	Probably yes	Yes

Hypertension	Yes [25]	It is unlikely to have hypertension so early in life that it effects the choice of education.	No, mediator.	No
Heart failure	Yes[26]	Unlikely, as above.	No, mediator.	No
Valvular heart diasese	Perhaps	Unlikely, as above.	No, mediator.	No
Ischemic heart diseases	Yes [27]	Unlikely, as above.	No, mediator	No
Peripheral artery disease	Yes [28]	Unlikely, as above.	No, mediator.	No
COPD	Yes [29]	Unlikely, as above.	No, mediator.	No
Chronic kidney disease	Yes[30]	Unlikely, as above.	No, mediator.	No
Obesity	Yes [31]	Probably yes	Maybe	Yes
Alcohol	Possible	Probably yes	Maybe	Yes
Congenital heart disease	No (but mothers SES does[32])	Probably [33]	Probably	Yes
Diabetes mellitus	Yes[34]	Maybe type I	Maybe type 1	Yes
Hyperthyroidism	High education seems to increase the risk [35]	Maybe	Maybe	Yes

Income

Variable (AF risk factors)	Potential intermediate variable: Does low income (exposure) increase the risk of the variable?	Potential confounder: Does the variable increase the risk of low income (exposure)	Confounder?	To be adjusted for?
Age	No	Yes (e.g. retirement)	Yes	Stratify
Male	No	Yes [36]	Yes	Stratify
Place of residence	Probably yes	Probably yes	Probably yes	Yes

Cohabiting status	Perhaps	Possible	Probably yes	Yes
Hypertension	Yes [25]	Perhaps	Possible, not likely	Yes
Heart failure	Yes[26]	Probably	Probably	Yes
Valvular heart disease	Probably	Probably	Probably	Yes
Diabetes mellitus	Yes[34]	Yes [37]	Yes	Yes
Ischemic heart diseases	Yes [27]	Yes [38]	Yes	Yes
Peripheral artery disease	Perhaps	Perhaps	Probably	Yes
Hyperthyroidism	No, high income increases the risk [35]	Maybe	Possible, not likely	Yes
COPD	Yes[29]	Probably	Probably	Yes
Chronic kidney disease	Yes[30]	Probably	Probably	Yes
Obesity	Yes [39]	Possible[39]	Probably	Yes
Alcohol	Probably[39]	Probably[39]	Probably	Yes
Congenital Heart disease	Mothers SES does [32]	Probably[33]	Probably	Yes

Table S7. Baseline characteristics for individuals excluded due to missing data (%)

Table S7. Baseline characteristics for individuals included and excluded due to missing data aged 35, 50, 65 or 80 years between 1996-2006 (percentages)								
Baseline age	35 years		50 years		65 years		80 years	
	Included	Excluded	Included	Excluded	Included	Excluded	Included	Excluded
Overall, n	729989	153882	720398	69422	467649	21872	255821	10651
Male, %	51	56	50	44	48	50	39	41
Women, %	49	44	50	56	52	50	61	59
Education								
Lowest, %	31	56	33	59	51	66	48	59
Middle, %	60	35	60	35	36	23	47	37
Highest, %	9	9	7	6	13	11	5	4
Place of Residence								
Peripheral, %	8	7	10	8	10	11	11	12
Rural, %	27	23	29	27	30	29	29	30
Intermediate, %	15	13	16	16	15	15	15	15
Urban, %	50	58	45	49	44	44	45	43
Cohabiting status								
Living alone, %	19	13	20	11	26	11	46	8
Not alone, %	81	87	80	89	74	89	54	92
Comorbidity								
Hypertension, %	1	0	6	3	17	10	26	20
Heart failure, %	0	0	0	0	1	1	3	3
VHD, %	0	0	0	0	1	1	2	1
IHD, %	0	0	2	2	7	5	12	10
PAD, %	0	0	0	0	2	1	4	3
CHD, %	0	0	0	0	0	0	0	0
Stroke, %	0	0	1	1	3	2	6	6
COPD, %	0	0	1	1	3	2	6	4
Renal disease, %	0	0	0	0	1	0	1	1

Alcoholism, %	1	1	2	2	2	2	1	1
Obesity, %	1	0	1	0	1	1	1	1
Diabetes, %	1	1	2	1	5	4	7	6
Hyperthyroidism, %	0	0	1	0	1	1	2	2
Immigrant, %	9	54	6	55	4	50	3	29

VHD; Valvular heart diseases, IHD; Ischemic heart diseases, PAD; Peripheral artery disease, CHD; Congenital Heart disease, COPD; Chronic obstructive pulmonary disease. Numbers in percent are rounded to nearest integer.

Figure S1. Flowchart over study population

Please see the Figure attached separately "Flowchart – Supplementary Figure S1"

Table S8. Crude and adjusted HR for AF by education and income

Table 2. Hazard rate ratios and 95% CI. of AF by education and income stratified on sex and age (Ref: low education and low income = 1)					
		Baseline age: 35 years	Baseline age: 50 years	Baseline age: 65 years	Baseline age: 80 years
Men					
	Income				
Model 1	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	1.08 (1.00 to 1.16)	0.91 (0.88 to 0.94)	0.98 (0.95 to 1.01)	1.02 (0.98 to 1.06)
	3	1.01 (0.94 to 1.08)	0.91 (0.88 to 0.94)	0.91 (0.89 to 0.94)	0.99 (0.96 to 1.02)
Model 2	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	1.10 (1.03 to 1.19)	0.92 (0.89 to 0.95)	0.99 (0.96 to 1.02)	1.02 (0.98 to 1.05)
	3	1.06 (0.98 to 1.14)	0.93 (0.90 to 0.96)	0.92 (0.90 to 0.95)	1.00 (0.96 to 1.03)
Model 3	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	1.12 (1.04 to 1.20)	0.96 (0.93 to 0.99)	0.99 (0.97 to 1.02)	1.02 (0.98 to 1.05)
	3	1.07 (1.00 to 1.16)	0.98 (0.94 to 1.01)	0.96 (0.93 to 0.98)	1.01 (0.98 to 1.05)
Men	Education				
Model 1	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	0.91 (0.85-0.97)	0.95 (0.93-0.98)	0.97 (0.95-0.99)	1.08 (1.05-1.11)
	3	0.84 (0.75-0.93)	0.88 (0.83-0.93)	0.94 (0.91-0.97)	0.98 (0.93-1.04)

Model 2	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	0.90 (0.84 to 0.96)	0.97 (0.94 to 1.00)	0.98 (0.95 to 1.00)	1.08 (1.05 to 1.11)
	3	0.84 (0.74 to 0.94)	0.90 (0.85 to 0.95)	0.98 (0.94 to 1.01)	0.98 (0.93 to 1.04)
Model 3	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	0.91 (0.86 to 0.97)	0.98 (0.95 to 1.01)	0.98 (0.96 to 1.00)	1.07 (1.04 to 1.11)
	3	0.85 (0.76 to 0.96)	0.92 (0.87 to 0.97)	0.99 (0.95 to 1.02)	0.98 (0.96 to 1.04)
Women					
	Income				
Model 1	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	0.87 (0.78 to 0.96)	0.83 (0.79 to 0.87)	0.95 (0.93 to 0.98)	0.99 (0.96 to 1.02)
	3	0.83 (0.75 to 0.93)	0.75 (0.71 to 0.78)	0.83 (0.81 to 0.86)	0.93 (0.91 to 0.96)
Model 2	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	0.90 (0.81 to 1.00)	0.85 (0.81 to 0.89)	0.97 (0.94 to 1.00)	0.98 (0.95 to 1.01)
	3	0.91 (0.81 to 1.02)	0.78 (0.74 to 0.82)	0.87 (0.84 to 0.90)	0.92 (0.89 to 0.95)
Model 3	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	0.92 (0.82 to 1.02)	0.88 (0.84 to 0.93)	0.98 (0.95 to 1.01)	0.98 (0.95 to 1.01)
	3	0.94 (0.84 to 1.05)	0.82 (0.78 to 0.87)	0.91 (0.88 to 0.94)	0.95 (0.92 to 0.97)
Women					
	Education				
Model	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	0.80 (0.72 to 0.87)	0.82 (0.79 to 0.86)	0.90 (0.87 to 0.92)	1.06 (1.04 to 1.09)
	3	0.57 (0.46 to 0.70)	0.77 (0.69 to 0.85)	0.85 (0.82 to 0.88)	1.01 (0.95 to 1.07)
Model 2	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	0.82 (0.74 to 0.90)	0.85 (0.82 to 0.89)	0.92 (0.90 to 0.95)	1.06 (1.04 to 1.09)
	3	0.59 (0.48 to 0.74)	0.81 (0.73 to 0.90)	0.90 (0.86 to 0.94)	1.04 (0.97 to 1.10)
Model 3	1	1 (ref)	1 (ref)	1 (ref)	1 (ref)
	2	0.84 (0.76 to 0.93)	0.87 (0.84 to 0.91)	0.93 (0.90 to 0.96)	1.05 (1.03 to 1.08)
	3	0.62 (0.50 to 0.77)	0.83 (0.75 to 0.92)	0.91 (0.87 to 0.95)	1.04 (0.97 to 1.10)

Model 1 (both): Crude.

Model 2 (both): Adjusted for income/education, place of residence and cohabiting status.

Model 3^a (income) Adjusted for Model 2 and hypertension, heart failure, valvular heart disease, diabetes mellitus I and II, ischemic heart disease, peripheral artery disease, hyperthyroidism, COPD, chronic kidney disease, alcoholism, obesity and congenital heart disease.

Model 3^b (education) Adjusted for Model 2 and diabetes mellitus, hyperthyroidism, alcoholism, obesity and congenital heart disease.

Table S9. Crude and adjusted RD for AF by education and income

Table S2. Risk difference and 95% CI. of AF by education and income stratified on sex and age					
		Baseline age: 35 years	Baseline age: 50 years)	Baseline age: 65 years	Baseline age: 80 years
Men					
Income					
Model 1	1	1.12 %	6.08 %	20.54 %	44.34 %
	2	0.11 (0.00 to 0.23)	-0.47 (-0.73 to -0.21)	0.33 (-0.40 to 1.07)	-0.99 (-3.40 to 1.42)
	3	0.01 (-0.09 to 0.11)	-0.38 (-0.65 to -0.12)	-1.44 (-2.08 to -0.80)	-1.32 (-3.90 to 1.26)
Model 2	1	1.31 %	6.44 %	21.31 %	41.48 %
	2	0.15 (0.04 to 0.27)	-0.43 (-0.70 to -0.16)	0.45 (-0.30 to 1.21)	-1.22 (-3.69 to 1.23)
	3	0.07 (-0.03 to 0.19)	-0.28 (-0.57 to -0.00)	-1.30 (-2.00 to -0.60)	-1.07 (-3.93 to 1.77)
Model 3	1	1.20 %	5.43 %	18.54 %	38.88 %
	2	0.17 (0.06 to 0.29)	-0.17 (-0.44 to 0.09)	0.50 (-0.25 to 1.26)	-1.34 (-3.80 to 1.11)
	3	0.10 (-0.00 to 0.22)	0.02 (-0.26 to 0.30)	-0.73 (-1.44 to -0.03)	-0.94 (-3.81 to 1.91)
Men					
Education					
Model 1	1	1.28 %	5.97 %	20.36 %	41.75 %
	2	-0.16 (-0.26 to -0.05)	-0.19 (-0.43 to 0.05)	-0.31 (-0.92 to 0.30)	4.13 (2.02 to 6.23)
	3	-0.21 (-0.38 to -0.05)	-0.68 (-1.07 to -0.29)	-0.96 (-1.77 to -0.15)	-0.83 (-3.76 to 2.09)
Model 2	1	1.31 %	6.44 %	21.31 %	41.48 %
	2	-0.17 (-0.28 to -0.06)	-0.10 (-0.36 to 0.14)	-0.11 (-0.75 to 0.52)	-4.18 (2.04 to 6.31)
	3	-0.21 (-0.38 to -0.04)	-0.61 (-1.02 to -0.19)	-0.18 (-1.06 to 0.69)	-0.74 (-3.98 to 2.49)

Model 3	1	1.25 %	5.93 %	20.50 %	41.41 %
	2	-0.16 (-0.27 to -0.06)	-0.03 (-0.34 to 0.22)	-0.06 (-0.69 to 0.57)	4.16 (2.00 to 6.31)
	3	-0.18 (-0.36 to -0.01)	-0.46 (-0.84 to -0.06)	-0.04 (-0.91 to 0.83)	-0.74 (-3.38 to 2.49)
Women					
		Income			
Model 1	1	0.55 %	3.22 %	14.19 %	35.93 %
	2	-0.06 (-0.15 to 0.02)	-0.55 (-0.74 to -0.36)	-0.57 (-1.07 to -0.08)	0.58 (-1.02 to 2.19)
	3	-0.08 (-0.16 to 0.00)	-0.78 (-0.98 to -0.59)	-2.16 (-2.68 to -1.64)	-0.54 (-2.18 to 1.09)
Model 2	1	0.68 %	3.50 %	14.88 %	33.05 %
	2	-0.02 (-0.11 to 0.05)	-0.48 (-0.67 to -0.29)	-0.39 (-0.89 to 0.10)	0.28 (-1.27 to 1.85))
	3	-0.02 (-0.11 to 0.06)	-0.67 (-0.87 to -0.47)	-1.74 (-2.30 to -1.18)	-1.36 (-2.98 to 0.25)
Model 3	1	0.60 %	2.89 %	12.41 %	29.38 %
	2	-0.02 (-0.10 to 0.06)	-0.35 (-0.55 to -0.16)	-0.34 (-0.84 to 0.14)	0.21 (-.34 to 1.77)
	3	-0.00 (-0.10 to 0.08)	-0.48 (-0.68 to -0.28)	-1.19 (-1.74 to -0.63)	-0.87 (-2.48 to 0.73)
Women					
		Education			
Model	1	0.65 %	3.12 %	13.96 %	34.8 %
	2	-0.18 (-0.27 to -0.09)	-0.57 (-0.73 to -0.40)	-1.29 (-1.74 to -0.84)	2.24 (0.79 to 3.68)
	3	-0.30 (-0.42 to -0.18)	-0.70 (-1.31 to -0.09)	-1.64 (-2.58 to -0.71)	2.52 (-0.95 to 6.00)
Model 2	1	0.68 %	3.50 %	14.88 %	33.05 %
	2	-0.17 (-0.27 to -0.08)	-0.46 (-0.63 to -0.30)	-0.99 (-1.14 to -0.53)	2.24 (0.77 to 3.70)
	3	-0.30 (-0.44 to -0.16)	-0.53 (1.14 to 0.07)	-0.96 (-1.94 to 0.01)	3.02 (-0.57 to 6.62)
Model 3	1	0.64 %	3.20 %	14.21 %	32.52 %
	2	-0.16 (-0.25 to -0.06)	-0.39 (-0.55 to -0.22)	-0.87 (-1.33 to -0.41)	2.14 (0.67 to 3.62)
	3	-0.28 (-0.43 to -0.14)	-0.44 (-1.05 to 0.16)	-0.82 (-1.79 to 0.15)	3.04 (-0.55 to 6.64)

Model 1 (both): Crude.

Model 2 (both): Adjusted for income/education, place of residence and cohabiting status.

Model 3^a (income) Adjusted for Model 2 and hypertension, heart failure, valvular heart disease, diabetes mellitus I and II, Ischemic heart disease, peripheral artery disease, hyperthyroidism, COPD, chronic kidney disease, alcoholism, obesity and congenital heart disease.

Model 3^b (education) Adjusted for Model 2 and diabetes mellitus, hyperthyroidism, alcoholism, obesity and

congenital heart disease.

The value in the baseline group shows the absolute risk in this group.

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