

Supplementary data

Table S1. Measurements and recordings related to coronary heart disease (CHD) risk factor management classified by age, gender and settlement type in North Karelia Hospital District in 2011–2014.

Gender	Age group	N	Settlement type	Smoking status		LDL cholesterol levels (mmol/l)				Body mass index (BMI) levels				Blood pressure	
				Smokers	Recorded	< 1.8	1.8<2.5	> 2.5	Recorded	< 25	25–29.9	> 30	Recorded	> 140/90	Recorded
Both genders	35–64	297	Regional centre	27 %	55 %	23 %	44 %	33 %	75 %	29 %	40 %	31 %	63 %	50 %	43 %
	65–74	279		8 %	62 %	28 %	42 %	30 %	78 %	32 %	34 %	35 %	61 %	60 %	54 %
	75–84	262		1 %	61 %	32 %	44 %	23 %	71 %	43 %	37 %	20 %	58 %	63 %	60 %
Males	35–64	231		26 %	55 %	24 %	46 %	30 %	75 %	22 %	40 %	31 %	62 %	51 %	41 %
	65–74	162		9 %	57 %	30 %	46 %	25 %	80 %	24 %	38 %	39 %	57 %	58 %	55 %
	75–84	126		1 %	62 %	37 %	47 %	16 %	75 %	43 %	45 %	12 %	59 %	58 %	57 %
Females	35–64	66		29 %	58 %	20 %	35 %	45 %	74 %	27 %	42 %	31 %	70 %	49 %	50 %
	65–74	117		7 %	69 %	25 %	36 %	39 %	75 %	38 %	31 %	31 %	67 %	61 %	53 %
	75–84	136		0 %	60 %	28 %	42 %	31 %	67 %	41 %	31 %	28 %	58 %	67 %	63 %
Both genders	35–64	282	Rural centre	28 %	62 %	29 %	36 %	36 %	81 %	25 %	35 %	40 %	70 %	46 %	55 %
	65–74	339		9 %	65 %	28 %	38 %	34 %	79 %	23 %	39 %	38 %	58 %	56 %	62 %
	75–84	366		3 %	60 %	29 %	41 %	30 %	77 %	35 %	37 %	28 %	55 %	48 %	67 %
Males	35–64	211		30 %	60 %	30 %	36 %	43 %	82 %	22 %	40 %	38 %	69 %	47 %	56 %
	65–74	218		10 %	66 %	33 %	38 %	37 %	77 %	21 %	44 %	35 %	58 %	54 %	60 %
	75–84	169		5 %	60 %	36 %	40 %	42 %	77 %	42 %	42 %	16 %	52 %	44 %	59 %
Females	35–64	71		21 %	68 %	23 %	34 %	43 %	79 %	34 %	22 %	44 %	72 %	43 %	52 %
	65–74	121		7 %	63 %	20 %	39 %	42 %	83 %	26 %	31 %	43 %	58 %	59 %	65 %
	75–84	197		2 %	60 %	22 %	42 %	36 %	76 %	30 %	33 %	38 %	57 %	50 %	74 %
Both genders	35–64	268	Remote areas	26 %	56 %	26 %	39 %	36 %	75 %	22 %	42 %	37 %	62 %	48 %	41 %
	65–74	230		6 %	63 %	35 %	34 %	31 %	81 %	24 %	41 %	35 %	59 %	55 %	55 %
	75–84	224		3 %	59 %	28 %	38 %	35 %	72 %	38 %	31 %	31 %	55 %	53 %	65 %
Males	35–64	209		28 %	56 %	26 %	40 %	34 %	75 %	21 %	42 %	37 %	63 %	44 %	42 %
	65–74	173		8 %	61 %	38 %	33 %	29 %	79 %	28 %	40 %	33 %	57 %	46 %	51 %
	75–84	140		3 %	55 %	31 %	40 %	30 %	74 %	41 %	29 %	30 %	56 %	49 %	61 %
Females	35–64	59		18 %	56 %	23 %	34 %	43 %	75 %	21 %	42 %	36 %	58 %	65 %	39 %
	65–74	57		3 %	68 %	27 %	37 %	37 %	86 %	16 %	43 %	41 %	65 %	76 %	65 %
	75–84	84		4 %	67 %	24 %	34 %	42 %	70 %	31 %	36 %	33 %	51 %	58 %	71 %
Standard deviation				10.6%	4.2%	5.0%	4.1%	6.9%	4.2%	8.1%	5.5%	7.5%	5.5%	8.0%	9.3%

Includes recordings after 30 days of diagnosis/procedure. Recordings of smoking status and BMI taken before that were also included when the person was a non-smoker / normal weight.

Table S2. Performed coronary heart disease (CHD) risk factor measurements and their levels by municipality classes in North Karelia Hospital District in 2011–2014.

Municipality		Smoking status		Low-density lipoprotein cholesterol (mmol/l)				Body mass index (BMI) levels				Blood pressure		Multimorbid patients
Number	Socio-economic structure - classification	Smokers	Rec.	Low-density lipoprotein cholesterol (mmol/l)				Body mass index (BMI) levels				Blood pressure		Multimorbid patients
				< 1.8	1.8<2.5	> 2.5	Rec.	< 25	25–29.9	> 30	Rec.	> 140/90	Rec.	
1	A	6 %	71 %	30 %	40 %	30 %	72 %	27 %	33 %	39 %	48 %	57 %	67 %	59 %
2	A	13 %	58 %	29 %	40 %	31 %	82 %	29 %	29 %	41 %	59 %	45 %	68 %	43 %
3	B	12 %	60 %	29 %	41 %	30 %	74 %	33 %	38 %	29 %	62 %	58 %	54 %	51 %
4	A	17 %	55 %	28 %	41 %	31 %	78 %	23 %	34 %	43 %	62 %	54 %	66 %	57 %
5	B	8 %	55 %	27 %	37 %	36 %	73 %	34 %	34 %	32 %	51 %	45 %	46 %	44 %
6	C	11 %	52 %	28 %	44 %	28 %	76 %	30 %	41 %	29 %	54 %	60 %	45 %	33 %
7	A	11 %	66 %	26 %	35 %	39 %	80 %	30 %	32 %	38 %	60 %	55 %	49 %	73 %
8	C	10 %	59 %	22 %	40 %	38 %	79 %	23 %	46 %	31 %	59 %	51 %	61 %	39 %
9	B	14 %	64 %	38 %	36 %	27 %	87 %	28 %	41 %	31 %	69 %	43 %	67 %	76 %
10	B	15 %	79 %	35 %	35 %	29 %	78 %	27 %	39 %	34 %	76 %	55 %	70 %	71 %
11	A	20 %	51 %	28 %	28 %	45 %	80 %	45 %	28 %	28 %	50 %	45 %	50 %	53 %
12	A	11 %	63 %	21 %	40 %	40 %	73 %	11 %	47 %	42 %	64 %	40 %	59 %	49 %
13	A	10 %	59 %	22 %	47 %	31 %	78 %	22 %	41 %	37 %	49 %	46 %	46 %	43 %
14	A	17 %	59 %	33 %	41 %	26 %	75 %	26 %	45 %	29 %	63 %	63 %	67 %	67 %
Females		8 %	63 %	23 %	38 %	39 %	76 %	32 %	33 %	35 %	61 %	58 %	62 %	55 %
Males		15 %	59 %	31 %	40 %	29 %	77 %	28 %	40 %	32 %	60 %	50 %	53 %	52 %
Both genders		12 %	60 %	28 %	40 %	32 %	77 %	30 %	38 %	33 %	60 %	53 %	56 %	53 %
Standard deviation of both genders		3.8 %	7.6%	4.8%	4.6%	5.6%	4.0%	7.7%	6.2%	5.4%	8.1%	7.1%	9.5%	13.5%

Includes recordings after 30 days of diagnosis/procedure. Recordings of smoking status and BMI taken before that were also included when the person was a non-smoker / normal weight.

Municipalities' socio-economic structure classification:

A Sparsely populated, low education, unemployment, primary production, high demographic vulnerability

B Moderately dense population, high education, service

C High education, high employment, diverse industry, low demographic vulnerability.

Table S3. Treatment outcomes of secondary prevention risk factor management among coronary heart disease (CHD) patients at age of 35–84 in North Karelia Hospital District in 2011–2014.

Male				Female	
	N		N		
Patients	1645		911		
BMI mean (95% CI)	978	28.4 (28.1–28.7)	551	28.4 (27.8–28.9)	
LDL-C mean (95% CI)	1265	2.2 (2.16–2.24)	690	2.4 (2.36–2.51)	
Triglycerides mean (95% CI)	1189	1.38 (1.33–1.43)	614	1.32 (1.27–1.37)	
Triglycerides < 1.7	932	78.4% (76–80.7%)	492	80.1% (77–83.3%)	
HDL mean (95% CI)	1205	1.3 (1.23–1.27)	626	1.5 (1.49–1.55)	
HDL (<1.0/1.2)	307	25.5% (23–27.9%)	143	22.8% (19.6–26.1%)	
HDL (>1.0/1.2)	898	74.5% (72.1–77%)	483	77.2% (73.9–80.4%)	
non-HDL mean (95% CI)	1196	2.60 (2.55–2.65)	621	2.79 (2.70–2.87)	
Systolic blood pressure (mean)	856	140.9 (139.5–142.3)	558	146.1 (144.5–147.7)	
Systolic blood pressure (<140)	430	49.4% (45.7–53.1%)	236	43% (38.7–47.4%)	
Diastolic blood pressure (mean)	863	79.5 (78.4–80.6)	561	79.1 (78.3–80)	
Diastolic blood pressure (<90)	576	82.2% (79.3–85%)	413	82.3% (78.9–85.6%)	

BMI=Body mass index, HDL=high-density lipoprotein, LDL=low-density lipoprotein, CI=confidence interval.

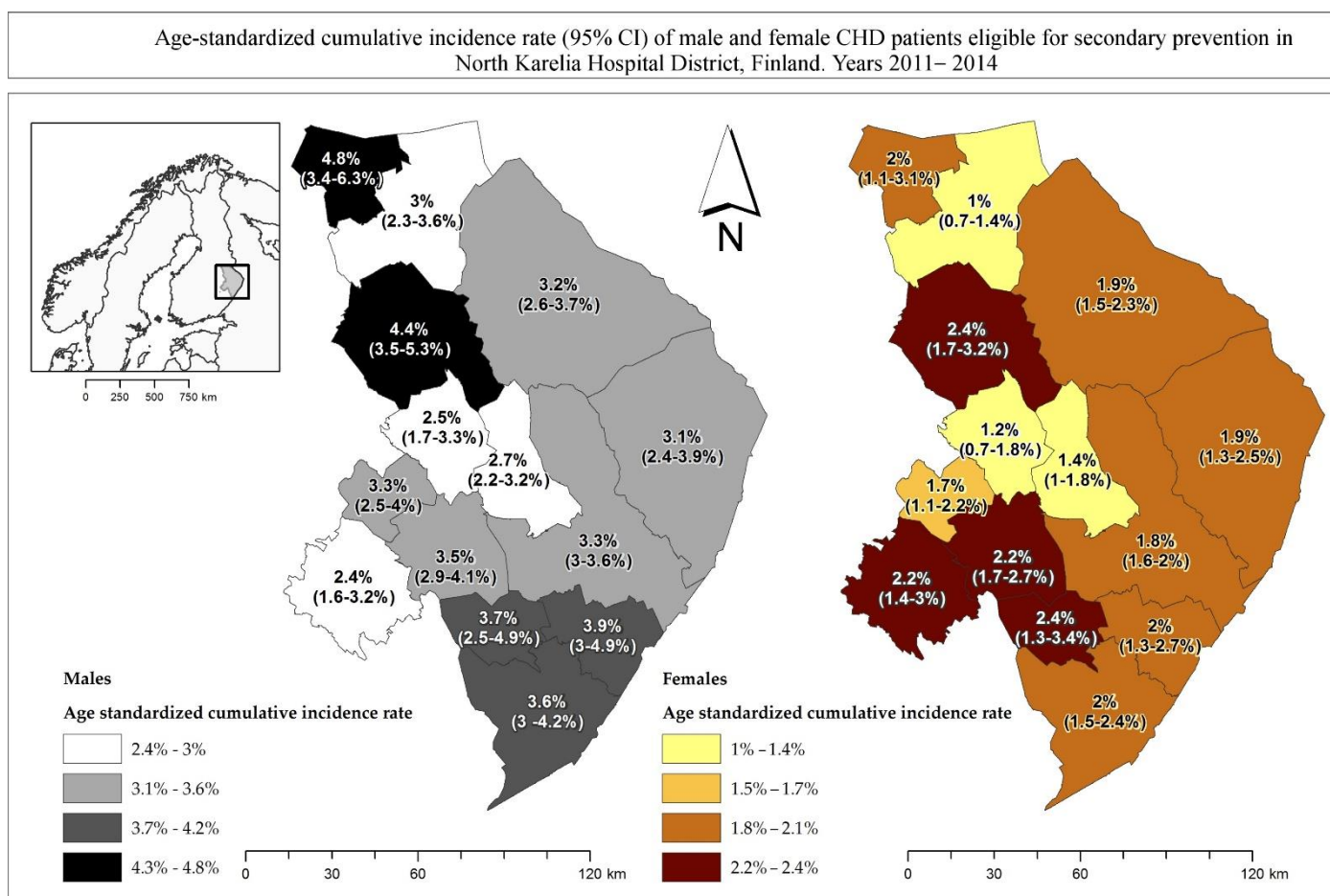


Figure S1. Age-adjusted cumulative incidence rate of acute coronary heart disease and/or invasive treatment of male and female patients by municipalities in North Karelia Hospital District in 2011–2014.