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**eSupplementary Table 1.** Sensitivity analysis showing nested models of the relationship between knowledge of health actions to prevent CVD and taking anti-hypertensive medication using regression-based weights (N=4032).

Variable	Total	Model 1	Model 2	Model 3
	population			
Knowledge of actions to				
prevent CVD score				
Low health knowledge	1324 (32.8)	Reference	Reference	Reference
Moderate health knowledge	1443 (35.8)	1.74 (1.33,2.28)	1.73 (1.31,2.28)	1.69 (1.27,2.26)
High health knowledge	1265 (31.4)	2.65 (1.64,4.27)	2.61 (1.59,4.28)	2.53 (1.51,4.22)
Education				
None or primary only	1265 (31.8)	Reference	Reference	Reference
Secondary	1300 (32.7)	1.18 (0.85, 1.64)	1.15 (0.89,1.49)	1.07 (0.83,1.37)
Trade, college or university	1410 (35.5)	1.32 (0.95,1.84)	1.19 (0.87,1.62)	1.08 (0.83,1.40)
Wealth index				
Poorest third	1673 (41.6)	Reference	-	Reference
Middle third	1343 (33.4)	1.18 (0.90,1.55)	-	1.14 (0.89,1.45)
Richest third	1007 (25.0)	1.49 (1.03,2.16)	-	1.39 (1.03,1.89)
-2logLikelihood (smaller is		3523	3517	3475
better)				

Model 1 is adjusted for a basic set of covariates in Table 1.Model 2 is adjusted for model 1 plus education. Model 3 is adjusted for model 2 plus wealth. Likelihood ratio test defined as 1 (bigger model) – 1 (smaller model) ~  $\chi^2_p$ . Where, 1 is the maximum log-likelihood, and p is the number of extra parameters in the bigger model.  $\chi^2_p$  is chi-squared value with p degrees of freedom. For sensitivity analysis we used regression weighted knowledge scores and summed that up to create health knowledge variable (3 categories).

**eSupplementary Table 2.** Sensitivity analysis showing nested models of the relationship between knowledge of health effects (of smoking) and smoking cessation using regression-based weights (N=1608).

Variable	Total population	Model 1	Model 2	Model 3
Knowledge of health				
effects of smoking score				
Low health knowledge	512 (37.9)	Reference	Reference	Reference
Moderate health knowledge	530 (33.0)	1.32 (1.02,1.70)	1.29 (1.00,1.67)	1.24 (0.96,1.62)
High health knowledge	566 (35.2)	1.37 (1.06,1.75)	1.39 (1.08,1.78)	1.33 (1.03,1.72)
Education				
None or primary only	609 (37.9)	Reference	Reference	Reference
Secondary	557 (34.7)	1.06 (0.84,1.34)	1.08 (0.86,1.36)	1.04 (0.82,1.32)
Trade, college or university	440 (27.4)	1.65 (1.26,2.16)	1.66 (1.26,2.18)	1.56 (1.18,2.06)
Wealth index				
Poorest third	52 9(33.4)	Reference	-	Reference
Middle third	519 (32.8)	1.26 (0.99,1.59)	-	1.20 (0.94,1.53)
Richest third	536 (33.8)	1.39 (1.08,1.79)	-	1.27 (0.98,1.65)
-2 Res Log Pseudo-Likelihoo	d (smaller is			
better)		9457	9454	9292

Model 1 is adjusted for a basic set of covariates in Table 1.Model 2 is adjusted for model 1 plus education. Model 3 is adjusted for model 2 plus wealth. Likelihood ratio test defined as 1 (bigger model) – 1 (smaller model) ~  $\chi^2_p$ . Where, 1 is the maximum log-likelihood, and p is the number of extra parameters in the bigger model.  $\chi^2_p$  is chi-squared value with p degrees of freedom. For sensitivity analysis we used regression weighted knowledge scores and summed that up to create health knowledge variable (3 categories).

**eSupplementary Table 3.** Association of health effects of smoking knowledge (3 categories), health actions score (3 categories) with smoking cessation and taking anti-hypertensive medication, across cross stratified categories of knowledge scores and education (3 x 3 categories). Model 1 is adjusted for a basic set of covariates in Table 1 (N=4032).

	Total	Education		
	population	(3 categories)		
Knowledge scores	edge scores None or primary Secondary		Secondary	Trade, college
(3 categories)		only or univ		or university
Health effects (of smoking)				
score				
Low health knowledge	512 (37.9)	Reference	1.12 (0.85,1.48)	1.75 (1.17,2.62)
Moderate health knowledge	530 (33.0)	2.32 (1.40,3.83)	2.68 (2.04,3.52)	2.14 (1.35,3.38)
High health knowledge	566 (35.2)	2.17 (1.58,2.97) 2.21 (1.31,3.72)		3.56 (2.40,5.27)
Health actions score				
Low health knowledge	1344 (33.3)	Reference	1.63 (1.07,2.49)	2.60 (1.25,5.40)
Moderate health knowledge	1329 (33.0)	2.60 (1.98,3.40)	1.94 (1.18,3.19)	3.16 (2.15,4.67)
High health knowledge	1359 (33.7)	3.54 (1.96,6.39)	4.05 (2.40,6.83)	3.01 (2.17,4.16)

Model 1 is adjusted for a basic set of covariates in Table 1. For sensitivity analysis we used regression weighted knowledge scores and summed that up to create health knowledge variable (3 categories).

**eSupplementary Table 4.** Association of health effects of smoking knowledge (3 categories), health actions score (3 categories) with smoking cessation and taking anti-hypertensive medication, across cross stratified categories of knowledge scores and wealth status (3 x 3 categories). Model 1 is adjusted for a basic set of covariates in Table 1 (N=4032).

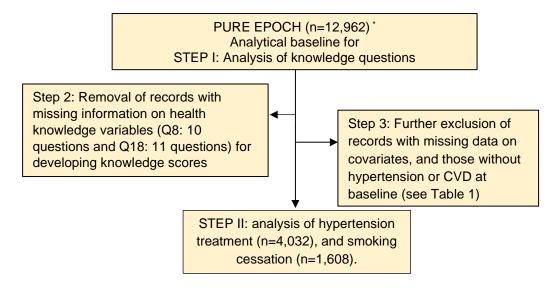
	Total population	Wealth status (3 categories)			
Knowledge scores	r or wassess			Richest third	
(3 categories)  Health effects (of smoking)					
score					
Low health knowledge	512 (37.9)	Reference	1.25 (0.86,1.83)	1.56 (1.02,2.38)	
Moderate health knowledge	530 (33.0)	2.49 (1.34,4.63)	2.39 (1.43,4.00)	2.55 (1.67,3.90)	
High health knowledge	566 (35.2)	2.19 (1.45,3.32) 2.29 (1.43,3.68)		3.11 (2.01,4.82)	
Health actions score				<b>.</b>	
Low health knowledge	1344 (33.3)	Reference	1.18 (0.76,1.83)	1.86 (1.15,2.98)	
Moderate health knowledge	1329 (33.0)	1.98 (1.36,2.88)	2.20 (1.41,3.44)	2.74 (1.88,3.99)	
High health knowledge	1359 (33.7)	3.19 (1.77,5.73)	3.14 (1.90,5.18)	3.40 (2.11,5.46)	

Model 1 is adjusted for a basic set of covariates in Table 1. For sensitivity analysis we used regression weighted knowledge scores and summed that up to create health knowledge variable (3 categories).

**eSupplementary Table 5.** Health effects of smoking and health actions to prevent heart attack or stroke in PURE study with their corresponding variable codes.

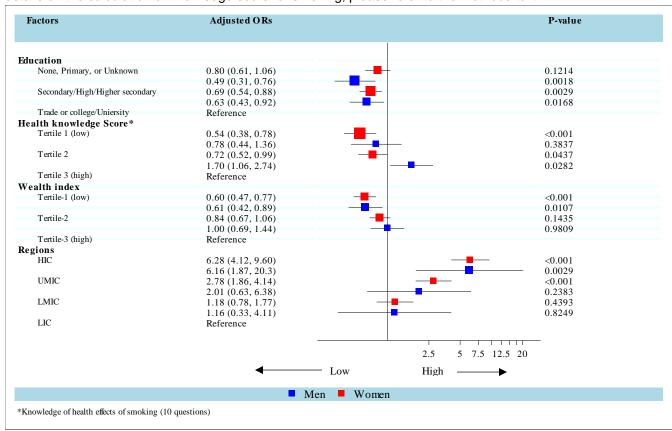
Smoking cessation	EPOCH CODE	N	Missing			
EPOCH Q8. I am going to read out a list						
	may or may not be causes by smoking cigarettes. Based on what you know					
or believe, does smoking cause any of t	_					
Chronic lung disease	eheclund	12579	383			
Heart disease	ehehdis	12961	1			
Diabetes	ehediab	12961	1			
Stroke	ehestrok	12961	1			
Arthritis	ehearth	12961	1			
Lung cancer	ehelucan	12962	0			
Mouth and throat cancer	ehemocan	12579	383			
Heart disease in non-smokers exposed	ehehdnsm	12962	0			
Premature birth with smoking during	eheprebi	12579	383			
pregnancy						
Low birth weight babies with smoking	ehelbirw	12579	383			
EPOCH Q18. Which of the following actions may prevent/stop a person from						
having a heart attack or stroke? Based	having a heart attack or stroke? Based on what you know or believe indicate					
no, yes or unsure for each statement.						
Doing more exercise	edomexe	12958	4			
Eating more fruit	eeatmfru	12958	4			
Eat more green vegetables	eeatmgve	12958	4			
Eat more meat	eeatmmea	12958	4			
Drinking more coffee	edrkmcof	12956	6			
Eating more dairy products	eeatmdpr	12958	4			
Eating more fish	eeatmfis	12957	5			
Smoking	esmoking	12957	5			
Reducing fat in meals	eredfatm	12958	4			
Reducing salt in meals	eredsalt	12958	4			
Gaining weight	egainwgt	12958	4			

## eSupplementary Figure 1. Flow diagram for analysis



\*Our analytical baseline includes 12,959 sample: 6485 men (% 49.9) and 6437 women (% 50.1) used for analysis of health knowledge variables and 4032 for exploring relationship between health knowledge, smoking cessation and hypertension medication.

**eSupplementary Figure 2.** Association between knowledge of health effect of smoking and <u>smoking cessation</u> from mutually adjusted model in PURE study, odds ratio (ORs) and 95% confidence interval. The analysis is adjusted for a basic set of covariates in Table 1. For details on the calculation of knowledge score for smoking, please refer to the methods text.



**eSupplementary Figure 3.** Distribution of health effect of smoking (10 questions) and health actions to prevent heart attack or stroke (11 questions) by country. % shows the proportion of participants reporting correct responses by country (n=12,962).

