

**Table S1. Preventable and non-preventable causes of death classification and its ICD-10 codes.**

	Causes of death	ICD-10 codes	Typology
Preventable	Cancer of oral cavity, pharynx, and esophagus	C00-C15	B/M
	Cancer larynx	C32	B/M
	Cancer of trachea, bronchus, and lung	C33-C34	B/M
	Diabetes Mellitus	E10-E14	B/M
	Chronic Obstructive Pulmonary Disease	J40-J44, J47	B/M
	Cancer of breast	C50	M
	Cancer of prostate	C61	M
	Hodgkin's disease and leukemia	C81, C91-C95	M
	Appendicitis, hernia, and peptic ulcer	K25–K28, K35–K38, K40–K46, K56	M
	Cancer of cervix	C53	B/M
	Hypertensive disease	I10-I15	B/M
	Ischemic heart disease	I20-I25	B/M
	Cerebrovascular disease	I60-I69	B/M
	Road traffic accidents	V01-V89, Y85	I
	Accidental falls	W00-W19	I
	Suicide	X60-X84, Y87.0	I
	Mental and behavioral disorders due to use of psychotropic drugs	F10, F11-F16, F18, F19	A
	Alcoholic cardiomyopathy	I42.6	A
	Pancreatitis	K85-K86.0	A
	Certain infectious and parasitic diseases	A00-B99, R75, U04.9	IP
Less Preventable	Cancer of stomach	C16	N
	Cancer of colorectum	C18-C21	N
	Cancer of liver	C22.0, C22.1, C22.9	N
	Cancer of kidney and bladder	C64-C68	N
	Cancer of pancreas	C25	N
	Other liver and gallbladder diseases	K71-K79, K84, K86.1-K87	N
Total mortality	All causes of death	All-Codes from ICD-10	

Adapted from Mackenbach et al. (2015). **B/M**= Prevention through behavioral change + medical intervention; **B**=Prevention through behavioral change; **M**= Prevention by medical intervention; **I**=injuries; **A**= related to the consumption of alcohol and other substances; **P**= Poisoning; **IP**= infectious and parasitic diseases; **N**=No preventable causes of death.

Mackenbach, J. P., Kulhánová, I., Bopp, M., Deboosere, P., Eikemo, T. A., Hoffmann, R., ... & EURO-GBD-SE Consortium. (2015). Variations in the relation between education and cause-specific mortality in 19 European populations: A test of the “fundamental causes” theory of social inequalities in health. *Social Science & Medicine*, 127, 51-62.

**Table S2. Intervention areas selected by program combination and cities**

program combination	City	Name of the vulnerable neighbourhood	census tracts selected	
			N	Mean of population
ARB	Alcalá de Guadaíra	Centro Urbano - Castillo Alcalá	2	891
		El Castillo - Centro - Panaderos	2	1173
	Cádiz	Balón-Hospital de Mujeres	6	1256
		Centro-San Carlos	8	1249
		Mentidero-Falla	5	1157
		Viña-Callejones	10	910
	Córdoba	Axarquía	3	1569
	Granada	Albaicín	3	1030
	Jerez de la Frontera	Barriada España	1	1057
		San Miguel-Vallesequillo	5	901
		Santiago-La Plata	3	965
	Málaga	Ciudad Jardín Sur-Los Naranjos-Las Flores-Pinares	2	1380
	Sanlúcar de Barrameda	Casco de Sanlúcar	8	1302
		El Pino	1	916
ARB+URBAN	Cádiz	Centro-San Carlos	2	993
		San Juan-Pópulo-Santa María	10	742
	Granada	Albaicín	2	722
	Jaén	San Juan	7	1334
	Málaga	Casco Histórico Oeste	3	827
		El Ejido-Lagunillas-La Victoria	3	734
	Sevilla	Casco Norte	10	1157
ARB+ZNTS	Alcalá de Guadaíra	El Castillo - Centro - Panaderos	2	720
	Algeciras	La Piñera	6	1176
	Almería	Chanca-San Cristóbal	1	1214
		Colonia Morato-Chanca	5	1075
		El Puche	3	1443
	Córdoba	Sector Sur	4	1088
	Granada	Almanjáyar	2	1847
		Cartuja	5	1503
		La Paz-Rey Badis	5	1216
	Málaga	El Ejido-Lagunillas-La Victoria	1	1174
		La Goleta-San Felipe Neri-La Merced	3	1229
ARB+ZNTS+URBAN	Huelva	Marismas del Odiel- Colonias	3	1123
	Málaga	Casco Histórico Oeste	1	1096
		La Goleta-San Felipe Neri-La Merced	1	714
	Sevilla	La Oliva	4	1471
		Las Letanías- Paz y Amistad	6	1280
		Las Vegas	3	1316
		Murillo- Antonio Machado	10	1324

**Table S3. Population of the cities considered according to 2001 census data.**

<b>City</b>	<b>2001 inhabitants</b>
Alcalá de Guadaira	57426
Algeciras	101468
Almería	166328
Cádiz	133363
Córdoba	308072
Granada	240661
Huelva	142284
Jaén	112590
Jerez de la Frontera	183273
Málaga	524414
Sanlúcar de Barrameda	60254
Sevilla	684633