

ExPoSE Dashboard – Dataset Version 1.0

Codebook

01/09/2024

	Variables	Definition	Notes
CVD scores	who_nonlab who_lab globorisk_nonlab globorisk_lab globorisk_lab_fatal fhs_nonlab	10-year CVD Risk Score (%)	<p>Estimated risk to develop a CVD event in the next 10 year.</p> <p>Who_nonlab, who_lab The WHO 2019 CVD non-lab risk score is based on age, sex, smoking, SBP and BMI. The lab risk score is based on age, sex, smoking, SBP, total cholesterol and diabetes mellitus status. They are recalibrated to 21 global regions. Reference: Kaptoge S, Pennells L, De Bacquer D et Al. World Health Organization cardiovascular disease risk charts: Revised models to estimate risk in 21 global regions. The Lancet Global Health. 2019;7(10): e1332–e1345. https://doi.org/10.1016/S2214-109X(19)30318-3</p> <p>globorisk_nonlab, globorisk_lab, globorisk_lab_fatal The Globorisk non-lab risk score is based on age, sex, smoking, SBP and BMI while the lab risk score is based on age, sex, smoking, SBP, total cholesterol and diabetes mellitus status. Reference: Ueda P, Woodward M, Lu Y et Al. Laboratory-based and office-based risk scores and charts to predict 10-year risk of cardiovascular disease in 182 countries: A pooled analysis of prospective cohorts and health surveys. The Lancet Diabetes & Endocrinology. 2017;5(3): 196–213. https://doi.org/10.1016/S2213-8587(17)30015-3</p> <p>fhs_nonlab The Framingham non-lab risk score is based on age, sex, smoking, SBP, diabetes mellitus status, treatment for hypertension. Reference:</p>

			<p>D'Agostino RB, Vasan RS, Pencina MJ, et al. General Cardiovascular Risk Profile for Use in Primary Care. Circulation. 2008;117(6):743-753. Doi:10.1161/CIRCULATIONAHA.107.699579</p> <p>CVD risk scores were calculated only for individuals aged 40 –75 years. Sbp_mean2 was used in the risk score calculations.</p>
Anthropometric	height	Height (centimetres)	<p>Implausible values considered: Height<120 cm or height > 220 cm</p> <p>The value is the arithmetic mean of the available plausible readings where more than one reading was taken.</p>
	weight	Weight (kilograms)	<p>Implausible values considered: From the 2nd South African Comparative Risk Assessment (SACRA) study: Females: Weight<25 Kg; Weight > 250 Kg Males: Weight <35 Kg; Weight > 250 Kg</p> <p>The value is the arithmetic mean of the available plausible readings where more than one reading was taken.</p>
	waist	Waist circumference (centimetres)	<p>Implausible values considered: waist < 30 cm or waist > 220 cm</p> <p>The value is the arithmetic mean of the available plausible readings where more than one reading was taken.</p>
	hip	Hip circumference (centimetres)	<p>Implausible values considered: (Based on the distribution in the sample) Hip circumference < 40 cm or hip circumference > 230 Hip measurements not available in the NIDS</p> <p>The value is the arithmetic mean of the available plausible readings where more than one reading was taken.</p>
	bmi	Body mass index (kg/m ²)	<p>Calculated using the mean height and weight measurements.</p> <p>Implausible values considered: BMI < 10 kg/m² or BMI>131 kg/m²</p>

			(Iyen B, Weng S, Vinogradova Y et al. Long-term body mass index changes in overweight and obese adults and the risk of heart failure, cardiovascular disease and mortality: a cohort study of over 260,000 adults in the UK. BMC Public Health. 2021;21:576. https://doi.org/10.1186/s12889-021-10606-1
	sbp_mean1 sbp_mean2	Systolic blood pressure (mmHg)	Implausible values considered: SBP < 60 mmHg or SBP > 270 mmHg SBP readings were set to missing if they were less than 15 mmHg greater than the corresponding DBP reading. sbp_mean1 is the arithmetic mean of all plausible available readings. sbp_mean2 excludes the first reading and takes the arithmetic mean of the remaining readings.
	dbp_mean1 dbp_mean2	Diastolic blood pressure (mmHg)	Implausible values considered: From the 2 nd South African Comparative Risk Assessment (SACRA) study: DBP < 30 mmHg; DBP > 150 mmHg. DBP readings were set to missing if they were less than 15 mmHg lower than the corresponding SBP reading. dbp_mean1 is the arithmetic mean of all plausible readings. dbp_mean2 excludes the first reading and takes the arithmetic mean of the remaining readings.
	hr_mean1 hr_mean2	Pulse/resting heart rate (Beats/minute)	Biologically implausible values: RHR < 20 bpm; RHR > 250 bpm (Informed by clinical opinion of Dr Thomas Kalk) hr_mean1 is the arithmetic mean of the available plausible measurements. hr_mean2 excludes the first reading and takes the arithmetic mean of the remaining readings.
Lifestyle	curralc	Current drinking (yes/no)	
	currsmok	Current smoking (yes/no)	
	gpaq	Physical activity: GPAQ	

		(MET minutes per week)	
Diagnoses	diag_hbp	Diagnosis of hypertension (yes/no)	Self reported.
	diag_isch	Diagnosis of ischaemic hearth disease (yes/no)	Self reported.
	diag_stroke	Diagnosis of stroke (yes/no)	Self reported.
	diag_diab	Diagnosis of diabetes (yes/no)	Self reported.
Medication	diabmed	Diabetes medication (yes/no)	Self-reported chronic medication use.
	bpmed	Antihypertensive medication (yes/no)	Self-reported chronic medication use.
	cholmed	Cholesterol medication (yes/no)	Self-reported chronic medication use.
Laboratory	hb	Haemoglobin (g/dl)	In DHS 2016, haemoglobin levels are adjusted for altitude in primary sampling units above 1,000 metres and for cigarette smoking among women and men. (National Department of Health SSA South African Medical Research Council, ICF. <i>South Africa Demographic and Health Survey 2016: Report</i> . National Department of Health; 2019. Page 272.)
	chol_tot	Total cholesterol (mmol/l)	
	chol_hdl	High-density lipoprotein (HDL) cholesterol (mmol/l)	
	chol_ldl	Low-density lipoprotein (LDL) cholesterol (mmol/l)	
	trig	Triglycerides mmol/l	
	HbA1c	HbA1c (mmol/mol)	

Years	year	Year of data collection (1998-2017)	Median survey year.
Country and regions	Country_name	Country (South Africa/ England)	
	Geolevel1_name	Second level administrative subdivision	Regions in England, Provinces in South Africa.
	Geotype2	Geographic type (Urban/non-urban)	
Demographics	sex	Sex (Male/Female)	
	agecat1	Age categories (5-year bands)	
	agecat2	Age categories (10-year bands)	
	marstatus	Marital status (Never married/single, Married/living with partner, Widowed/divorced/separated)	
	race_en	Ethnicity (White/Black/Asian/Mixed/Other)	Only available for England.
	race_sa	Population group (Black African/Coloured/Asian/White)	Only available for South Africa.
Socioeconomic indicators	emp	Employment status (yes/no)	Unemployed includes those who are not economically active where the survey has a separate category for not economically active.
	hh_windex_quint	Household Wealth Index (I-V)	The household wealth index score was derived by principal component analysis (keeping only the first component), separately in each dataset. The score was constructed from the indicators available in each survey, using the DHS 2016 wealth index creation as a guide. The original classifications in each survey were used to create indicator variables for the principal components analysis. Indicators included: Dwelling ownership & dwelling type, Durable asset ownership (TV, washing machine, stove, car, etc.), Toilet

			<p>facilities, Source of drinking water, Main material for roof/walls/floors of the dwelling, Number of household members per number of rooms (sleeping rooms where available. NIDS only has total number of rooms and not sleeping rooms), Type of refuse disposal, Type of cooking fuel. This wealth index is a relative measure that is specific to each survey and not comparable across surveys or time. Within each source dataset, higher values of the wealth index correspond to higher socioeconomic status.</p> <p>Only available for South Africa.</p>
	medaid	Covered by medical insurance (yes/no)	Only available for South Africa.
	edu2	Education (No education, Some primary, Completed primary, Some secondary, Completed secondary/Any higher education, Other)	Highest level of education. Categorisation for South Africa.
	hh_income_quint	Household Income quintile (I-V)	Only available for England.
	Edu3	Education (No qualification, NVQ1/CSE other grade equiv, NVQ2/GCE O Level equiv, NVQ3/GCE A Level equiv, NVQ4/NVQ5/Degree or equiv, Higher ed below degree, Foreign/Other)	Highest level of education. Those for whom the item was not applicable were coded as having no qualification. Categorisation for England.

