Supplementary Table 3: Weighted Multiple Regression for Association of Country-Level Parameters with Case Fatality Ratio

Removing Health Expenditure, Diabetes prevalence, ASR mortality – unsafe water, Life Expectancy at birth, % mortality from CVD, cancer and Henley Passport

Model Summary[b,c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.856[a]	.733	.701	29.1191140	2.056

a. Predictors: (Constant), Median Age, GDP per capita, % smoking prevalence in age >/= 15 years, maternal mortality ratio per 100K live births, Population Density persons per sqkm, ASR 100K Mortality air pollution, Hospital Beds per 1000 of population, infant mortality ratio per 1000 live births, Physicians per 1000 People

b. Dependent Variable: CFR 15-May

c. Weighted Least Squares Regression - Weighted by Weight (1/SE^2)

ANOVA[a,b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	172553.366	9	19172.596	22.611	.000[c]
	Residual	62746.287	74	847.923		
	Total	235299.654	83			

a. Dependent Variable: CFR 15-May

b. Weighted Least Squares Regression - Weighted by Weight (1/SE^2)

c. Predictors: (Constant), Median Age, GDP per capita, % smoking prevalence in age >/= 15 years, maternal mortality ratio per 100K live births, Population Density persons per sqkm, ASR 100K Mortality air pollution, Hospital Beds per 1000 of population, infant mortality ratio per 1000 live births, Physicians per 1000 People

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-13.534	3.384		-4.000	.000	-20.276	-6.791		
	GDP per capita	-4.176E-005	.000	-.341	-3.146	.002	.000	.000	.307	3.255
	maternal mortality ratio per 100K live births	.008	.008	.110	.983	.329	-.008	.024	.290	3.451
	infant mortality ratio per 1000 live births	.171	.060	.379	2.858	.006	.052	.290	.204	4.890
	Hospital Beds per 1000 of population	-.855	.164	-.713	-5.222	.000	-1.182	-.529	.193	5.169
	Physicians per 1000 People	.603	.316	.275	1.908	.060	-.027	1.233	.173	5.780
	% smoking prevalence in age >/= 15 years	-.138	.037	-.349	-3.764	.000	-.211	-.065	.419	2.385
	ASR 100K Mortality air pollution	-.039	.012	-.399	-3.331	.001	-.063	-.016	.251	3.983
	Population Density persons per sqkm	-.001	.000	-.886	-9.178	.000	-.001	-.001	.386	2.588
	Median Age	.660	.105	1.036	6.308	.000	.452	.869	.134	7.481

a. Dependent Variable: CFR 15-May

b. Weighted Least Squares Regression - Weighted by Weight (1/SE^2)

CFR for countries with >/= 1000 cases on the cut-off date were evaluated for independent association with 13 different country-level indices of health, human development, population demographics, economic development and mobility using weighted multiple linear regression analysis. Weighted regression was used because different countries with different numbers of cases and deaths contributed unequal amount of information. Weights were assigned using the inverse of the square of the standard error of CFR for each country. The multicollinearity assumption was tested using Variance Inflation Factor (VIF). Independence of residuals and homoscedasticity assumptions were checked using Durbin-Watson test and residuals plot (scatter plot of standardised residuals versus standardised predicted values), respectively. Variables which showed high collinearity (VIF > 10) were removed systematically at each step until the model only included factors which showed VIF < 10.

Abbreviations:
GDP - Gross Domestic Product per Capita, MMR- Maternal Mortality Rate,
IMR: Infant Moratality Rate, CVD: Cardiovascular Diseases,
ASR : Age Standardised Rate