

## Supplementary file

**Supplementary Table 1: List of significant variables retained in principal component analysis (PCA) for constructing household wealth index, PNGIMR's CHESS 2018-2020**

Number	Variable name	Extraction	Component 1
<b>Water and sanitation</b>			
1	Main source of water for drinking	0.827	0.315
2	Main source of water for cooking	0.887	0.333
3	Water source location	0.739	-0.176
4	Kind of toilet facility	0.834	0.13
5	Shared/ non shared toilet facility	0.744	-0.01
6	Public / household shared toilet facilities	0.661	0.047
<b>Hand washing</b>			
7	Facility for washing hands	0.713	-0.055
8	Available water for hand washing	0.737	-0.029
9	Available soap or detergent for washing hands	0.852	-0.383
10	Bar soap available	0.844	0.404
11	Detergent (Powder / Liquid / Paste) available	0.751	0.015
12	Liquid soap Available	0.756	0.282
13	Ash / Mud / Sand available	0.852	0.303
14	None above available	0.591	-0.086
<b>Housing characteristics</b>			
15	Type of house	0.955	0.206
16	Number of room in house	0.848	-0.095
17	Number of sleeping room	0.835	-0.109
18	Wall materials	0.846	0.117
19	Floor materials	0.766	-0.166
20	Roof amterials	0.889	0.234
21	Source of fuel for cooking	0.618	-0.015
22	Separate room for cooking	0.79	-0.126
<b>Household assets</b>			
23	Owned/ Not owned car/Truck	0.751	0.083
24	Owned/ Not owned Cupboard	0.777	0.245
25	Owned/ Not owned Motorcycle	0.768	0.035
26	Owned/ Not owned Bicycle	0.775	0.28
27	Owned/ Not owned Generator	0.722	0.227
28	Owned/ Not owned Computer	0.796	0.213
29	Owned/ Not owned Refrigerator	0.85	0.075
30	Owned/ Not owned Freezer	0.811	0.053
31	Owned/ Not owned Clock/Watch	0.702	0.233
32	Owned/ Not owned Radio	0.721	0.465
33	Owned/ Not owned TV	0.743	0.334
34	Owned/ Not owned Fan	0.834	0.195
35	Owned/ Not owned Landline phone	0.822	0.035

36	Owned/ Not owned Table/chairs	0.641	0.294
37	Owned/ Not owned Canoe/boat	0.746	-0.109
38	Owned/ Not owned Air-conditioner	0.702	-0.039
39	Owned/ Not owned Gas/elect cooker	0.847	0.075
40	Owned/ Not owned Washing machine	0.666	0.095
41	Owned/ Not owned Mobile phone	0.776	0.267
42	Owned/ Not owned Beds (framed)	0.831	0.267
43	Owned/ Not owned Internet connection	0.641	-0.004
44	Owned or rent house	0.719	-0.029
45	Owned agriculture land	0.917	-0.005
46	Ownership of water surface for aquaculture	0.906	-0.015
47	Owned livestock, farm animals	0.773	-0.277
48	Ownership of BUFFALO	0.607	-0.026
49	Ownership of HORSES	0.737	0.086
50	Ownership of GOATS	0.675	0.012
51	Ownership of SHEEP	0.686	-0.03
52	Ownership of CHICKENS	0.768	0.039
53	Ownership of PIGS	0.777	0.355
54	Ownership of DUCKS	0.753	-0.038
55	Ownership of bank account	0.876	-0.037
56	English spoken in the household	0.726	0.203
57	Tok-Pisin spoken in the household	0.795	-0.102
58	Motu spoken in the household	0.867	0.109
59	Tokples spoken in the household	0.742	-0.205
<b>Health services</b>			
60	Close to health facility	0.794	0.306
61	Transportation means commonly used	0.758	0.195
62	Last time used the health service	0.801	-0.032
63	Out-patient consultation service	0.8	-0.134
64	In-patient clinical, care and treatment service	0.841	0.146
65	Laboratory investigation services	0.777	0.102
66	Cost for health service	0.611	-0.19
67	Satisfaction of health service provided	0.681	-0.284
<b>Household size</b>			
68	Urban-rural sector	0.815	-0.074
69	Total number of ALL household members	0.907	-0.011
70	Total number of WOMEN aged 15-49	0.754	0.02
71	Total number of CHILDREN under 5	0.752	0.02
72	Total number of MEN aged 15-65	0.738	-0.037
<b>Education</b>			
73	Household members aged 5-24 attended class in school year 2018	0.596	-0.013
74	Educational level attended by household members aged 5-24 years	0.912	0.06
75	School grades attended by household members in school year 2018	0.918	0.039

**Supplementary Table 2: Unadjusted and adjusted odds ratios of mortalities from TB and HIV/AIDS versus other causes of death by household sociodemographic characteristics of the deceased, binary logistic regression analysis, PNGIMR's CHES, 2018-2020**

Socioeconomic determinant	Category	N	%	Unadjusted Odds Ratio <sup>b</sup>				Adjusted Odds Ratio <sup>c</sup>			
				uOR	Lower	Upper	P-value	aOR	Lower	Upper	P-value
Sector	Urban	226	34.0%	0.317	0.166	0.606	0.001	0.149	0.105	0.356	0.001
	Rural	439	66.0%	Ref.				Ref.			
Province <sup>a</sup>	POM	30	4.5%	1.013	0.250	4.107	0.985	1.013	0.391	2.313	0.961
	Central	167	25.1%	0.698	0.324	1.505	0.359	0.641	0.151	1.447	0.366
	EHP	277	41.7%	1.255	0.637	2.473	0.512	1.227	0.545	2.033	0.488
	Madang	75	11.3%	2.658	1.116	6.331	0.027	1.977	1.078	3.070	0.032
	ENB	116	17.4%	Ref.				Ref.			
Sex	Male	387	58.2%	0.736	0.479	1.129	0.160	0.693	0.229	1.125	0.165
	Female	278	41.8%	Ref.				Ref.			
Age group (in year)	0-4	39	5.9%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5-14	20	3.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15-24	45	6.8%	3.713	1.190	11.581	0.024	2.312	1.008	3.790	0.020
	25-34	64	9.6%	7.820	2.842	21.518	0.000	3.057	2.161	4.514	0.003
	35-44	62	9.3%	7.059	2.566	19.421	0.000	2.954	2.020	4.485	0.003
	45-54	115	17.3%	3.230	1.203	8.671	0.020	2.173	1.227	3.574	0.013
	55-64	131	19.7%	3.363	1.297	8.718	0.013	2.213	1.252	3.457	0.015
	65-74	102	15.3%	2.257	0.822	6.200	0.114	1.814	0.777	3.175	0.101
Household wealth	Poorest	135	20.3%	1.618	0.779	3.363	0.197	1.481	0.756	2.363	0.195
	Poor	135	20.3%	1.539	0.736	3.216	0.252	1.431	0.619	2.258	0.251
	Middle	130	19.5%	3.232	1.598	6.536	0.001	2.173	1.503	2.985	0.002
	Rich	130	19.5%	1.950	0.940	4.043	0.073	1.668	0.918	2.488	0.079
	Richest	135	20.3%	Ref.				Ref.			
Valid		665	100.0%	<sup>a</sup> No data of ESP was included in the Multivariate Logistic Regress Model.							
Missing		261		<sup>b</sup> Dependent variable was deaths from HIV/AIDS and tuberculosis. The reference category was deaths from other COD rather than these two diseases. Socioeconomic and demographic factors included in the model were urban-rural sector, province, sex and age group of the deceased and household wealth group.							
Total		926		<sup>c</sup> Results were based on 1000 bootstrap samples.							
Subpopulation		341 <sup>d</sup>		<sup>d</sup> The dependent variable had only one value observed in 271 (79.5%) subpopulations.							