

Supplementary material 2 : Complete case analysis

Table S2. Resources used, unit costs by types of care, and distribution of average household costs for one episode of severe childhood pneumonia in US\$ (n=1,442), 2019 price year

Parameters	Resource used (n, %)				Average costs per each parameter by type of facilities (US\$)								Overall costs of treatment in US\$ (n=1,442)				% of mean household costs
	Urban		Rural		Urban				Rural				Mean	SD	Median	IQR	
	SpHs/AHs(n=721)	PHs (n=206)	DH (n=145)	UHCs (n=370)	SpHs/AHs (n=721)		PH (n=206)		DH (n=145)		UHCs (n=370)						
	n (%)	n (%)	n (%)	n (%)	Mean	SD	Mean	SD	Mean	SD	Mean	SD					
Diagnostic tests	598 (83.0)	196 (95.5)	73 (50.3)	20 (5.4)	8.1	5.8	13.4	17.9	1.7	4.7	0.3	3.0	5.6	10.1	3.2	8.1	3.9
Medicine	721 (100)	206 (100.0)	129 (89.0)	338 (91.6)	19.9	15.6	27.3	28.2	8.4	7.4	9.7	6.7	17.3	17.2	13.3	12.9	12.0
Consultation/physician fee	192 (26.7)	125 (61.8)	46 (31.7)	33 (9.0)	3.9	3.8	7.6	16.9	1.5	2.7	0.4	3.9	1.9	7.5	0.0	1.3	1.3
Registration/admission fee	714 (99.1)	203 (98.6)	144 (99.3)	352 (95.7)	0.5	0.3	2.9	2.4	0.1	0.0	0.2	0.4	0.8	1.5	0.3	0.3	0.5
Medical consumables (e.g. syringe, cannula)	614 (85.2)	203 (98.6)	119 (82.1)	219 (59.5)	3.1	2.9	6.7	5.3	1.2	1.0	1.7	2.0	2.9	3.2	2.2	3.6	2.0
Bed/ Cabin charge	84 (11.7)	190 (92.7)	2 (1.4)	5 (1.3)	18.0	12.6	22.7	37.9	0.1	1.5	0.4	4.4	4.6	18.8	0.0	0.0	3.2
Nebulization	593 (82.3)	188 (91.4)	2 (1.4)	30 (8.2)	10.0	6.4	16.5	12.2	0.0	0.1	0.2	2.5	3.4	8.3	0.0	0.0	2.4
Oxygen	11 (1.5)	61 (30.0)	0 (0.0)	2 (0.5)	1.2	0.8	3.1	12.2	0.0	0.0	0.0	0.4	0.5	4.8	0.0	0.0	0.3
Therapeutic diet	22 (3.1)	12 (5.9)	9 (6.2)	11 (3.0)	1.4	1.2	0.1	0.9	0.1	0.4	0.0	0.4	0.1	0.5	0.0	0.0	0.0
Direct Medical	-	-	-	-	-	-	-	-	-	-	-	-	37.0	50.9	22.7	31.7	25.7
Transportation	689 (95.6)	205 (99.6)	145 (100.0)	363 (98.6)	6.2	5.1	10.6	8.4	3.8	4.3	3.6	3.6	5.8	7.0	4.2	6.2	4.0
Informal payment	414(57.5)	88 (42.3)	1 (0.7)	36 (9.8)	1.1	0.7	1.0	2.5	0.0	0.1	0.1	0.3	0.5	1.2	0.0	0.6	0.3
Expenditure for caregivers	525 (72.9)	177 (86.4)	137 (94.5)	277 (75.3)	5.8	5.1	9.0	9.8	4.8	3.5	3.2	3.3	4.7	5.9	3.3	5.7	3.3
Others	39 (5.5)	29 (14.1)	4 (2.8)	45 (12.2)	2.0	0.6	1.1	4.7	0.1	1.1	0.2	1.5	0.3	2.1	0.0	0.0	0.2
Direct Non-Medical	-	-	-	-	-	-	-	-	-	-	-	-	11.3	11.7	8.7	9.6	7.8
LoS (Mean, ±SD)	5.7 (2.4)	5.7 (±3.1)	3.1 (±1.4)	3.8 (±2.3)	-	-	-	-	-	-	-	-	-	-	-	-	-
Total direct cost	-	-	-	-	-	-	-	-	-	-	-	-	48.3	58.2	31.3	38.3	33.5
Total indirect cost	-	-	-	-	-	-	-	-	-	-	-	-	95.8	73.5	76.3	59.8	66.5
Total household cost	-	-	-	-	-	-	-	-	-	-	-	-	144.1	115.2	113.9	96.4	100.0

SpH- Specialized hospitals/ AH-autonomous hospitals (n=4); PH- Private hospitals (n=8); DH- District Hospital (n=1); UHC- Upazila Health Complex (n=3)

Table S3. Bi-variate and multiple logged linear regression model (n=1,442)

Variables	Unadjusted model					Adjusted model				
	Coef.	SE	95% CI		P-value	Coef.	SE	95% CI		P-value
			Lower	Upper				Lower	Upper	
Length of stay (LoS)	0.16	0.01	0.13	0.19	<0.001	0.14	0.01	0.12	0.16	<0.001
Patient's age in months	-0.01	0.00	-0.01	0.00	<0.001	0.00	0.00	-0.01	0.00	0.01
Mother's education										
No formal education (ref)	-	-	-	-		-	-	-	-	
Upto primary	-0.20	0.07	-0.33	-0.07	<0.001	0.00	0.04	-0.08	0.09	0.94
Secondary	-0.10	0.07	-0.23	0.03	0.14	0.06	0.04	-0.02	0.15	0.17
Higher	0.12	0.08	-0.04	0.28	0.13	0.11	0.05	0.00	0.22	0.05
Father's education										
No formal education (ref)	-	-	-	-		-	-	-	-	
Upto primary	-0.18	0.06	-0.30	-0.07	<0.001	-0.02	0.04	-0.09	0.06	0.68
Secondary	-0.07	0.06	-0.19	0.04	0.21	-0.02	0.04	-0.09	0.06	0.68
Higher	0.14	0.07	0.01	0.27	0.03	0.01	0.05	-0.08	0.10	0.84
Wealth quintile										
Poorest (ref)	-	-	-	-		-	-	-	-	
Poorer	0.19	0.05	0.10	0.28	<0.001	0.07	0.04	-0.01	0.14	0.08
Middle	0.44	0.05	0.34	0.54	<0.001	0.15	0.05	0.06	0.25	<0.001
Richer	0.62	0.05	0.52	0.71	<0.001	0.20	0.05	0.10	0.30	<0.001
Richest	0.79	0.05	0.69	0.89	<0.001	0.31	0.05	0.21	0.42	<0.001
Place of residence										
Urban	0.62	0.03	0.56	0.68	<0.001	-	-	-	-	-
Rural (ref)										
Father's occupation										
Transport workers (ref)	-	-	-	-		-	-	-	-	
Informal workers	-0.03	0.07	-0.16	0.10	0.67	0.05	0.04	-0.04	0.13	0.31
Farmer	-0.32	0.07	-0.46	-0.18	<0.001	0.12	0.05	0.02	0.23	0.02
Salaried employees	0.12	0.06	0.00	0.23	0.04	0.05	0.04	-0.03	0.13	0.21
Business	0.12	0.06	0.00	0.24	0.05	0.12	0.04	0.04	0.20	<0.001
Others	0.04	0.08	-0.12	0.19	0.62	0.02	0.05	-0.08	0.13	0.65
Facility type										

Autonomous/Specialized hospital	0.50	0.03	0.43	0.57	<0.001	0.09	0.05	0.00	0.19	0.04
District hospital	0.05	0.05	-0.05	0.15	0.30	0.15	0.04	0.08	0.23	<0.001
Private	1.08	0.04	1.00	1.17	<0.001	0.67	0.05	0.57	0.76	<0.001
Upazila Health Complex (ref)						-				
Constant	-	-	-	-	-	3.71	0.08	3.55	3.87	0.00
N						1,442				
<i>Prob > F</i>						0.00				
<i>R-squared</i>						0.60				
<i>Root MSE</i>						0.41				
<i>Mean VIF</i>						2.30				

Coef., Coefficient; *SE*, Standard Error; *CI*, Confidence Interval; *VIF*, Variance Inflation Factor;