

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Mean Length of Stay by Hospital Teaching Status and Mean Laboratory Tests Per Day By Illness Severity Category and Hospital Teaching Status for Sensitivity Analyses

	Major Teaching (N=11)	Minor Teaching (N=12)	Non-teaching (N=73)	P Value*
Excluding patients requiring many labs				
Bacterial Pneumonia				
Mean (SD) LOS	3.63 (3.54, 3.72)	3.7 (3.62, 3.78)	3.67 (3.63, 3.71)	.56
Mean Labs Per Day	12.69 (12.3, 13.08)	9.35 (9.10, 9.60)	8.71 (8.61, 8.81)	<.001
Illness Severity 1	11.69 (10.81, 12.57)	9.4 (8.75, 10.05)	8.61 (8.37, 8.85)	<.001
Illness Severity 2	12.84 (12.3, 13.38)	9.4 (9.06, 9.74)	8.82 (8.68, 8.96)	<.001
Illness Severity 3	12.8 (12.1, 13.50)	9.15 (8.65, 9.65)	8.56 (8.38, 8.74)	<.001
Illness Severity 4	14.17 (11.46, 16.88)	10.15 (8.33, 11.97)	8.51 (7.68, 9.34)	<.001
Cellulitis				
Mean (SD) LOS	3.54 (3.46, 3.62)	3.51 (3.43, 3.59)	3.56 (3.53, 3.59)	.57
Mean Labs Per Day	9.97 (9.67, 10.27)	8.15 (7.91, 8.39)	7.02 (6.94, 7.10)	<.001
Illness Severity 1	9.02 (8.55, 9.49)	7.47 (7.14, 7.80)	6.54 (6.41, 6.67)	<.001
Illness Severity 2	10.26 (9.85, 10.67)	8.61 (8.25, 8.97)	7.2 (7.08, 7.32)	<.001
Illness Severity 3	11.22 (10.19, 12.25)	8.56 (7.76, 9.36)	7.85 (7.55, 8.15)	<.001
Illness Severity 4	13.29 (7.69, 18.89)	11.12 (0.04, 22.2)	8.09 (6.64, 9.54)	.03
Excluding hospitalizations from major teaching hospital outlier				
Bacterial Pneumonia				
Mean (SD) LOS	3.93 (3.86, 4.00)	3.92 (3.85, 3.99)	3.91 (3.88, 3.94)	.65
Mean Labs Per Day	11.25 (11.02, 11.48)	9.48 (9.28, 9.68)	8.92 (8.84, 9.00)	<.001
Illness Severity 1	10.51 (9.82, 11.20)	9.3 (8.68, 9.92)	8.6 (8.37, 8.83)	<.001
Illness Severity 2	10.98 (10.63, 11.33)	9.39 (9.11, 9.67)	8.9 (8.78, 9.02)	<.001
Illness Severity 3	11.68 (11.31, 12.05)	9.58 (9.25, 9.91)	9 (8.87, 9.13)	<.001
Illness Severity 4	11.45 (10.50, 12.40)	10.17 (9.05, 11.29)	9.39 (8.92, 9.86)	<.001
Cellulitis				
Mean (SD) LOS	3.76 (3.69, 3.83)	3.71 (3.63, 3.79)	3.75 (3.72, 3.78)	.59
Mean Labs Per Day	9.18 (8.96, 9.40)	8.3 (8.09, 8.51)	7.29 (7.22, 7.36)	<.001
Illness Severity 1	8.09 (7.70, 8.48)	7.46 (7.14, 7.78)	6.56 (6.44, 6.68)	<.001
Illness Severity 2	9.23 (8.92, 9.54)	8.55 (8.25, 8.85)	7.37 (7.26, 7.48)	<.001
Illness Severity 3	10.26 (9.74, 10.78)	9.08 (8.53, 9.63)	8.19 (8.01, 8.37)	<.001
Illness Severity 4	10.82 (9.45, 12.19)	9.66 (6.90, 12.42)	9.42 (8.03, 10.81)	.42

eTable 2. Cellulitis Generalized Mixed Linear Regression Results for Main Adjusted Model						
	Estimate	Standard Error	Relative rate	95% CI		P Value
(Intercept)	2.27	0.03	9.68	9.21	10.28	<.001
Hospital Type-Non-teaching	Reference					
Major Teaching	0.30	0.07	1.35	1.19	1.54	<.001
Minor Teaching	0.14	0.06	1.15	1.01	1.30	.03
Illness Severity 1	Reference					
2	0.21	0.01	1.23	1.21	1.25	<.001
3	0.43	0.01	1.54	1.51	1.57	<.001
4	0.63	0.01	1.88	1.73	2.03	<.001
Age Group 18-34	Reference					
35-54	0.07	0.01	1.08	1.05	1.09	<.001
55-74	0.09	0.01	1.09	1.06	1.12	<.001
75+	-0.02	0.01	0.99	0.96	1.01	.29
Gender Female	Reference					
Male	0.00	0.00	1.00	0.99	1.01	.92
Race- White	Reference					
Asian or Pacific Islander	0.07	0.04	1.07	0.99	1.15	.08
Black	0.06	0.01	1.06	1.04	1.09	<.001
Other	-0.01	0.01	0.99	0.96	1.01	.25
Length of Stay	-0.14	0.00	0.87	0.86	0.87	<.001
Ethnicity Hispanic	Reference					
Not Hispanic	-0.75	0.01	0.47	0.90	0.95	<.001
Payer-Private	Reference					
Medicaid	0.00	0.01	1.00	0.99	1.02	.66
Medicare	0.01	0.01	1.01	0.98	1.03	.58
Military	0.00	0.04	1.00	0.93	1.07	.99
Uninsured	0.06	0.01	1.06	1.04	1.08	<.001
Type of Admission-Emergency	Reference					
Urgent	-0.10	0.01	0.90	0.89	0.93	<.001
Direct	-0.11	0.01	0.90	0.88	0.92	<.001
Discharge Disposition-Home	Reference					
Home with Home Health	0.10	0.01	1.11	1.08	1.12	<.001
Skilled Nursing Facility	0.06	0.02	1.06	1.03	1.09	<.001
Hospice	0.10	0.08	1.11	0.95	1.28	.20
Other	0.07	0.01	1.07	1.05	1.11	<.001
Deceased	0.17	0.10	1.19	0.99	1.43	.07

eTable 3. Bacterial Pneumonia Generalized Mixed Linear Regression Results for Main

Adjusted Model						
	Estimate	Standard Error	Relative rate	95% CI		P Value
(Intercept)	2.52	0.03	12.43	11.70	13.07	<.001
Hospital Type-Non-teaching	Reference					
Major Teaching	0.34	0.06	1.40	1.25	1.57	<.001
Minor Teaching	0.08	0.06	1.08	0.97	1.21	.16
Illness Severity 1	Reference					
2	0.12	0.01	1.12	1.10	1.15	<.001
3	0.26	0.01	1.30	1.28	1.33	<.001
4	0.43	0.02	1.53	1.48	1.59	<.001
Age Group 18-34	Reference					
35-54	0.05	0.01	1.05	1.03	1.08	<.001
55-74	0.05	0.01	1.05	1.02	1.07	<.001
75+	-0.04	0.01	0.96	0.94	0.99	.01
Gender Female	Reference					
Male	0.04	0.01	1.04	1.03	1.05	<.001
Race- White	Reference					
Asian or Pacific Islander	0.08	0.02	1.08	1.03	1.14	.00
Black	0.05	0.01	1.05	1.03	1.06	<.001
Other	0.00	0.01	1.00	0.98	1.02	.87
Length of Stay	-0.13	0.00	0.88	0.87	0.88	<.001
Ethnicity Hispanic	Reference					
Not Hispanic	-0.05	0.01	0.95	0.93	0.97	<.001
Payer-Private	Reference					
Medicaid	0.00	0.01	1.00	0.99	1.02	.66
Medicare	-0.02	0.01	0.98	0.95	1.00	.08
Military	-0.03	0.03	0.97	0.91	1.03	.28
Uninsured	0.02	0.01	1.02	1.00	1.04	.08
Type of Admission-Emergency	Reference					
Urgent	-0.11	0.01	0.90	0.87	0.91	<.001
Direct	-0.17	0.01	0.84	0.83	0.87	<.001
Discharge Disposition-Home	Reference					
Home with Home Health	0.00	0.01	1.00	0.98	1.02	.87
Skilled Nursing Facility	-0.02	0.01	0.98	0.96	1.00	.03
Hospice	-0.05	0.02	0.95	0.91	1.00	.04
Other	0.02	0.01	1.02	1.00	1.04	.09
Deceased	0.10	0.03	1.11	1.04	1.17	.00