

Appendix 1. Study Site A Utilization Metrics. Data presented represents the average hourly values. Delta values indicate the degree of change per hour. * indicates statistical significance.

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	P-value	
Census																										
Pre-COVID-19	57.70	51.57	46.33	43.03	38.57	33.97	30.43	29.00	34.73	42.80	52.73	60.77	66.37	69.27	74.20	75.33	77.03	77.50	78.23	76.27	77.23	75.60	70.87	64.87		
COVID-19	39.67	37.23	36.43	33.07	30.90	28.97	26.23	25.17	27.83	32.07	36.50	41.67	45.57	47.47	49.00	49.80	49.63	49.30	49.30	48.67	48.03	47.53	44.93	43.13	7.82E-10*	
Pre-COVID-19 Delta	0.89	0.89	0.90	0.93	0.90	0.88	0.90	0.95	1.20	1.23	1.23	1.15	1.09	1.04	1.07	1.02	1.02	1.01	1.01	0.97	1.01	0.98	0.94	0.92		
COVID Delta	0.92	0.94	0.98	0.91	0.93	0.94	0.91	0.96	1.11	1.15	1.14	1.14	1.09	1.04	1.03	1.02	1.00	0.99	1.00	0.99	0.99	0.99	0.95	0.96	0.75	
Arrivals																										
Pre-COVID-19	7.70	5.87	6.33	5.23	4.07	4.17	5.17	7.00	12.40	14.80	18.07	18.43	16.07	15.93	16.33	16.03	16.07	15.10	14.50	13.07	14.77	12.03	9.63	9.60		
COVID-19	5.67	4.87	5.37	3.73	3.90	4.03	3.80	5.47	6.83	8.83	10.30	11.90	11.73	11.97	10.97	9.23	9.77	9.43	9.33	8.13	8.07	7.67	6.53	6.40	2.74E-08*	
Pre-COVID-19 Delta	0.80	0.76	1.08	0.83	0.78	1.02	1.24	1.35	1.77	1.19	1.22	1.02	0.87	0.99	1.03	0.98	1.00	0.94	0.96	0.90	1.13	0.81	0.80	1.00		
COVID Delta	0.89	0.86	1.10	0.70	1.04	1.03	0.94	1.44	1.25	1.29	1.17	1.16	0.99	1.02	0.92	0.84	1.06	0.97	0.99	0.87	0.99	0.95	0.85	0.98	0.80	
Admission																										
Pre-COVID-19	3.80	3.33	2.20	2.07	2.03	1.20	1.30	2.27	1.77	1.23	1.10	1.30	1.70	1.50	2.37	3.57	3.63	3.40	3.63	3.67	2.63	4.33	3.40	2.50		
COVID-19	2.43	2.77	2.30	1.97	1.90	1.87	1.37	1.37	1.27	1.20	0.97	2.40	2.43	2.37	2.73	3.20	3.80	3.37	2.77	2.57	2.27	3.70	3.23	3.13	0.42	
Pre-COVID-19 Delta	1.52	0.88	0.66	0.94	0.98	0.59	1.08	1.74	0.78	0.70	0.89	1.18	1.31	0.88	1.58	1.51	1.02	0.94	1.07	1.01	0.72	1.65	0.78	0.74		
COVID Delta	0.78	1.14	0.83	0.86	0.97	0.98	0.73	1.00	0.93	0.95	0.81	2.48	1.01	0.97	1.15	1.17	1.19	0.89	0.82	0.93	0.88	1.63	0.87	0.97	0.92	
Laboratory																										
Pre-COVID-19	40.30	32.43	38.33	27.80	22.00	22.30	22.50	28.03	44.73	60.63	62.90	77.33	74.00	70.83	59.90	77.70	75.33	61.67	66.10	61.50	61.43	54.90	59.80	47.50		
COVID-19	49.93	47.00	53.80	28.87	35.27	33.57	28.33	32.30	48.87	64.77	77.10	86.50	83.93	99.53	104.47	102.30	97.93	74.37	77.90	67.30	68.13	56.87	60.07	49.83	1.11E-05*	
Pre-COVID-19 Delta	0.85	0.80	1.18	0.73	0.79	1.01	1.01	1.25	1.60	1.36	1.04	1.23	0.96	0.96	0.85	1.30	0.97	0.82	1.07	0.93	1.00	0.89	1.09	0.79		
COVID Delta	1.00	0.94	1.14	0.54	1.22	0.95	0.84	1.14	1.51	1.33	1.19	1.12	0.97	1.19	1.05	0.98	0.96	0.76	1.05	0.86	1.01	0.83	1.06	0.83	0.98	
Radiology																										
Pre-COVID-19	17.03	12.93	11.20	12.90	7.93	8.10	8.70	8.17	14.53	20.13	20.50	21.83	22.93	23.20	20.17	25.47	27.03	20.60	23.80	21.93	19.97	22.80	19.37	18.90		
COVID-19	12.50	12.23	13.07	8.60	8.30	7.10	6.57	8.10	11.17	13.27	17.87	15.53	19.60	24.93	23.90	22.93	21.53	18.83	20.93	21.20	16.90	15.30	16.73	12.97	0.000273*	
Pre-COVID-19 Delta	0.90	0.76	0.87	1.15	0.61	1.02	1.07	0.94	1.78	1.39	1.02	1.07	1.05	1.01	0.87	1.26	1.06	0.76	1.16	0.92	0.91	1.14	0.85	0.98		
COVID Delta	0.96	0.98	1.07	0.66	0.97	0.86	0.92	1.23	1.38	1.19	1.35	0.87	1.26	1.27	0.96	0.96	0.94	0.87	1.11	1.01	0.80	0.91	1.09	0.77	0.90	

Appendix 2. Study Site B Utilization Metrics. Data presented represents the average hourly values. Delta values indicate the degree of change per hour. * indicates statistical significance.

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	P-value	
Census																										
Pre-COVID-19	20.0	18.2	16.57	15.1	13.7	12.3	11.5	12.1	15.30	18.50	22.17	28.2	31.57	32.80	32.47	31.87	32.2	32.20	32.4	32.13	31.73	29.50	26.57	23.07		
COVID-19	15.87	14.30	12.83	11.27	10.57	9.80	9.53	10.10	10.87	11.67	13.53	15.37	16.83	18.27	19.53	19.57	20.47	21.00	20.93	21.43	21.37	20.57	18.73	17.20	3.84E-09*	
Pre-COVID-19 Delta	0.87	0.91	0.91	0.91	0.91	0.90	0.93	1.06	1.26	1.21	1.20	1.27	1.12	1.04	0.99	0.98	1.01	1.00	1.01	0.99	0.99	0.93	0.90	0.87		
COVID-19 Delta	0.92	0.90	0.90	0.88	0.94	0.93	0.97	1.06	1.08	1.07	1.16	1.14	1.10	1.09	1.07	1.00	1.05	1.03	1.00	1.03	1.00	0.96	0.91	0.92	0.79	
Arrivals																										
Pre-COVID-19	3.90	3.67	3.23	3.13	2.70	2.57	2.63	3.20	5.23	6.20	7.53	9.73	8.23	7.43	6.90	6.73	6.90	7.03	7.23	6.73	6.13	5.30	4.33	3.97		
COVID-19	3.03	2.20	2.13	1.80	1.83	1.73	2.03	2.20	2.43	3.10	4.17	4.33	4.60	4.80	4.13	4.27	4.53	4.23	3.90	4.40	3.73	3.93	2.97	2.97	6.69E-09*	
Pre-COVID-19 Delta	0.98	0.94	0.88	0.97	0.86	0.95	1.03	1.22	1.64	1.18	1.22	1.29	0.85	0.90	0.93	0.98	1.02	1.02	1.03	0.93	0.91	0.86	0.82	0.92		
COVID-19 Delta	1.02	0.73	0.97	0.84	1.02	0.95	1.17	1.08	1.11	1.27	1.34	1.04	1.06	1.04	0.86	1.03	1.06	0.93	0.92	1.13	0.85	1.05	0.75	1.00	0.93	
Admission																										
Pre-COVID-19	0.60	0.30	0.63	0.47	0.47	0.23	0.20	0.20	0.43	0.23	0.20	0.40	0.17	0.30	0.53	0.60	0.40	0.83	0.50	0.43	0.97	0.73	0.80	0.63		
COVID-19	1.20	0.90	1.07	0.70	0.60	0.60	0.20	0.60	0.67	0.37	0.17	0.30	0.30	0.13	0.53	0.57	0.80	1.00	0.90	0.53	1.40	1.07	0.63	0.67	3.89E-04*	
Pre-COVID-19 Delta	0.95	0.50	2.11	0.74	1.00	0.50	0.86	1.00	2.17	0.54	0.86	2.00	0.42	1.80	1.78	1.13	0.67	2.08	0.60	0.87	2.23	0.76	1.09	0.79		
COVID-19 Delta	1.80	0.75	1.19	0.66	0.86	1.00	0.33	3.00	1.11	0.55	0.45	1.80	1.00	0.44	4.00	1.06	1.41	1.25	0.90	0.59	2.63	0.76	0.59	1.05	0.67	
Laboratory																										
Pre-COVID-19	15.70	13.97	14.33	10.60	13.67	9.63	11.90	20.33	15.83	23.37	25.23	35.63	37.37	26.70	28.87	34.93	29.77	29.60	32.13	23.10	23.33	26.17	24.13	15.67		
COVID-19	15.43	19.30	16.40	15.03	13.67	8.23	15.03	15.67	15.23	13.73	27.63	37.37	37.40	32.73	41.93	31.97	41.80	39.13	41.40	31.33	24.67	20.80	30.50	23.43	2.21E-02*	
Pre-COVID-19 Delta	1.00	0.89	1.03	0.74	1.29	0.70	1.24	1.71	0.78	1.48	1.08	1.41	1.05	0.71	1.08	1.21	0.85	0.99	1.09	0.72	1.01	1.12	0.92	0.65		
COVID-19 Delta	0.66	1.25	0.85	0.92	0.91	0.60	1.83	1.04	0.97	0.90	2.01	1.35	1.00	0.88	1.28	0.76	1.31	0.94	1.06	0.76	0.79	0.84	1.47	0.77	0.84	
Radiology																										
Pre-COVID-19	5.20	4.50	5.17	4.03	2.60	3.17	3.30	4.40	4.20	7.30	8.53	10.13	10.23	7.30	10.07	9.43	9.53	8.83	8.33	7.53	6.50	7.20	6.37	5.73		
COVID-19	5.93	4.30	4.33	4.03	3.67	3.07	3.37	3.57	3.67	4.87	7.10	7.97	7.93	8.27	10.00	8.63	7.97	8.63	8.27	6.50	6.30	5.20	5.63	6.37	9.12E-03*	

Pre- COVID-19	0.91	0.87	1.15	0.78	0.64	1.22	1.04	1.33	0.95	1.74	1.17	1.19	1.01	0.71	1.38	0.94	1.01	0.93	0.94	0.90	0.86	1.11	0.88	0.90	
Delta COVID Delta	0.93	0.72	1.01	0.93	0.91	0.84	1.10	1.06	1.03	1.33	1.46	1.12	1.00	1.04	1.21	0.86	0.92	1.08	0.96	0.79	0.97	0.83	1.08	1.13	0.80