**Supplemental Data**

**Survey question to assess clinically meaningful number need to test (NNT)**

“Assuming the presence of existing CDC-defined infection prevention practices are in place (e.g. use of universal facemask use by all healthcare personnel) what, in your expert opinion, would be a minimum number needed to test for asymptomatic COVID-19 patients upon admission to render universal asymptomatic admission screening a useful practice (select 1 option)?

* 1 positive detected for every 10 patients tested
* 1 positive detected for every 50 patients tested
* 1 positive detected for every 100 patients tested
* 1 positive detected for every 200 patients tested
* 1 positive detected for every 300 patients tested
* 1 positive detected for every 400 patients tested
* 1 positive detected for every 500 patients tested”

**Supplemental Table 1: Immediate Form of Two Sample Test of Proportions, p-values for Positivity Rate Comparisons**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Comparator 1** | **Comparator 2** | **p-value** |
| **Overall Study Period by Hospital Site** | Tertiary Care Adult | Pediatric | <0.0001 |
| Behavioral Health | 0.0003 |
| Community | 0.0011 |
| Pediatric | Behavioral Health | 0.0524 |
| Community | <0.0001 |
| Behavioral Health | Community | <0.0001 |
| **Moderate Transmission Period by Hospital Site** | Tertiary Care Adult | Pediatric | 0.4763 |
| Behavioral Health | 0.7618 |
| Community | 1.0000 |
| Pediatric | Behavioral Health | 0.5357 |
| Community | 0.6347 |
| Behavioral Health | Community | 0.7915 |
| **Substantial Transmission Period by Hospital Site** | Tertiary Care Adult | Pediatric | 0.1235 |
| Behavioral Health | 0.0301 |
| Community | 1.0000 |
| Pediatric | Behavioral Health | 0.0937 |
| Community | 0.2510 |
| Behavioral Health | Community | 0.0303 |
| **High Transmission Period by Hospital** | Tertiary Care Adult | Pediatric | 0.0059 |
| Behavioral Health | 0.0023 |
| Community | 0.0004 |
| Pediatric | Behavioral Health | 0.1391 |
| Community | <0.0001 |
| Behavioral Health | Community | <0.0001 |

**Supplemental Table 2: Immediate Form of Two Sample Test of Proportions, p-values for Positivity Rate Comparison within Individual Hospital Settings**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Comparator 1** | **Comparator 2** | **p-value** |
| **All Hospitals Combined by Transmission Period** | Moderate | Substantial | 0.5372 |
| High | <0.0001 |
| Substantial | High | <0.0001 |
| **Tertiary Care Hospital by Transmission Period** | Moderate | Substantial | 1.0000 |
| High | <0.0001 |
| Substantial | High | < 0.0001 |
| **Pediatric Hospital by Transmission Period** | Moderate | Substantial | 0.0839 |
| High | 0.4368 |
| Substantial | High | 0.0010 |
| **Behavioral Health Hospital by Transmission Period** | Moderate | Substantial | 0.0532 |
| High | 0.5862 |
| Substantial | High | 0.0175 |
| **Community Hospital by Transmission Period** | Moderate | Substantial | 1.0000 |
| High | 0.0048 |
| Substantial | High | 0.0001 |

**Supplemental Table 3: Immediate Form of Two Sample Test of Proportions, p-values for Positivity Rate Comparisons by Vaccination Status**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Comparator 1** | **Comparator 2** | **p-value** |
| **Overall Study Period by Vaccination Status** | Fully Vaccinated | Not Fully Vaccinated | < 0.0001 |
| **Moderate Transmission Period by Vaccination Status** | Fully Vaccinated | Not Fully Vaccinated | 0.0.0243 |
| **Substantial Transmission Period by Vaccination Status** | Fully Vaccinated | Not Fully Vaccinated | 0.1292 |
| **High Transmission Period by Vaccination Status** | Fully Vaccinated | Not Fully Vaccinated | 0.0289 |

**Supplemental Table 3: Immediate Form of Two Sample Test of Proportions, p-values for Positivity Rate Comparison within Vaccination Status**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Comparator 1** | **Comparator 2** | **p-value** |
| **Fully Vaccinated** | Moderate | Substantial | 0.6141 |
| High | 0.2149 |
| Substantial | High | 0.5495 |
| **Not Fully Vaccinated** | Moderate | Substantial | 0.7491 |
| High | 0.0115 |
| Substantial | High | 0.0467 |

**Supplemental Table 5: Subgroup Analysis of Admission Testing for SARS-CoV-2 Infection in a Pediatric Hospital Using Community COVID-19 Incidence Rates for Persons Aged 0-18 Years**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **All Transmission Levels****n=60** | **Low Transmission Levels****n=0** | **Moderate Transmission Levels****n=13** | **Substantial Transmission Levels****n=18** | **High Transmission Levels****n=29** |
| **# Tested** | 7892 | 0 | 1321 | 2560 | 4011 |
| **# Positives (%)** | 113 (1.4%) | 0 | 15 (1.1%) | 24 (0.9%) | 74 (1.8%) |
| **NNT** **(95% CI)** | 70 | n/a | 88 (54-157) | 107 (72-166) | 54 (43-69) |
| **Total** **Test** **Costs** | $394,600 | n/a | $66,050 | $128,000 | $200,550 |
| **Cost to Detect 1 Positive Patient** | $3,500 | n/a | $4,400 | $5,350 | $2,700 |

**NNT: number needed to test to identify 1 positive patient**

**Supplemental Table 6: Subgroup Analysis of Admission Testing for SARS-CoV-2 Infection in a Community Hospital Using Community Specific COVID-19 Incidence Rates for the Specific County**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **All Transmission Levels****n=60** | **Low Transmission Levels****n=1** | **Moderate Transmission Levels****n=11** | **Substantial Transmission Levels****n=7** | **High Transmission Levels****n=41** |
| **# Tested** | 4828 | 1 | 759 | 617 | 3451 |
| **# Positives (%)** | 126 (2.6%) | 0 (0%) | 6 (0.8%) | 5 (0.8%) | 115 (3.3%) |
| **NNT (95% CI)** | 38 | n/a | 127 (58-344) | 123 (53-379) | 30 (25-36) |
| **Total Test Costs** | $241,400 | $50 | $37,950 | $30,850 | $172,550 |
| **Cost to Detect 1 Positive Patient** | $1,900 | n/a | $6,350 | $6,150 | $1,500 |

**NNT: number needed to test to identify 1 positive patient**