

## Supplementary Materials

### Supplementary Methods

#### Anterior Nasal Swab Collection procedure

The following swab collection procedure was utilized: after the participant blew their nose, the collector inserted swab #1 into the individual's right nostril and rotated the swab 5 times in a circular motion around the inside wall of the nostril for a duration of 10-15 seconds, followed by a repeat of the process in the left nostril. The swab was placed into a sterile plastic tube.

Immediately thereafter, swab #2 was inserted into the individual's left nostril (always opposite from the initial swab) and the process repeated (left nostril followed by right nostril). To minimize sampling bias, the study site personnel alternated which test-specific nasal swab sample was collected first (BinaxNOW or RT-PCR).

#### Kit Storage

Abbott BinaxNOW kits were stored in a temperature-controlled office (70-72°F) and transferred to the testing site as needed.

#### Testing Site

Testing was performed in a "testing pod," initially a shipping container. The pod was initially open on one side to the outdoors, but difficulty in maintaining adequate temperature in the pod required moving testing to a fully enclosed room (mobile trailer). The testing site contained three 6' tables. Two tables were designated as "dirty" for testing purposes and one "clean" for data entry. Absorbent underpads with plastic backing (Attends ASB-2336, Greenville, NC) were placed on testing tables along with hand sanitizer, gloves, testing kits, pens, sticky notes, a

continuous temperature and humidity data logger (HOBO UX100-011A, Bourne, MA), a digital clock, and a bin for specimens to be tested. The clean table included hand sanitizer, gloves, pens, a time stamp machine, and a laptop computer for data entry. Underpads were removed daily, surfaces were disinfected with germicidal disposable wipes (PDI, Woodcliff Lake, NJ), and new underpads placed. Operators performing testing were wearing disposable gowns, N95 respirators, face shields and gloves.

### Quality Control

Lot numbers were recorded for Abbott BinaxNOW kits (boxes of 40 tests), test cards, manufacturer-provided swabs [unflocked foam tipped; Puritan #25-1506 (Guilford, ME)], positive controls, and extraction reagent. Manufacture and expiration dates were also recorded. Each study subject tested was recorded for every kit of BinaxNow tests used. Positive and negative controls were run for every kit when first opened. If an opened kit was not used in full over the course of one day, a negative control was run for the kit the following day when testing resumed.

### BinaxNOW Testing

At the collection site, anterior nasal swab specimens were collected using the manufacturer-provided swab (above) into a labeled 15ml conical tube and placed into a specimen collection bag with a BinaxNow intake form (which was labeled and time/date stamped at the time of collection) and extra labels. Specimens were then shuttled to the testing pod by a designated individual (“runner”), either on foot (shipping container) or by car (mobile trailer). All tests were initiated within an hour of specimen collection time. For each specimen, testing staff added 6 drops of extraction reagent to the BinaxNOW card (making sure to remain perpendicular and

avoid touching the tip of the reagent bottle to the card), inserted the swab specimen and rotated three times, closed the testing card, and affixed a patient label to the outside of the BinaxNOW card. The time the card was closed was recorded on the BinaxNOW intake form as the test start time. The test start time and time the card was to be read (16 minutes after closing the card) were also recorded on a sticky note and adhered to the outside of the BinaxNOW card. At the time of result reading, the tester silently recorded their result, initials, and time on the Binax intake form as the official result. The tester then passed the card to a second reader, who read the card result aloud (so that the tester could record results on the back of the intake form) and took a photo of the card. There was no attempt to resolve any discordance between the two readers; the first read of each card was the official result used for database and clinical reporting. If the result was determined to be positive by either reader, the reader categorized the positive line as “faint”, “medium”, or “strong” depending on the strength of the positive sample line compared to the control line of each card. Completed BinaxNOW cards were discarded in biohazard waste.

### PCR assay details

Dry swabs [SteriPack Sterile Polyester Spun Swab, 3” (Lakeland, Florida)]

transported in a sterile tube (Becton Dickinson, # BD 366408) at room temperature were resuspended in 1000 uL of Swab Preservation Buffer (Norgen Biotek, Inc) and allowed to elute for 15 minutes. Extraction and RT-PCR methods followed the EUA protocol for the CRSP SARS-CoV-2 Real-time Reverse Transcriptase (RT)-PCR Diagnostic Assay

(<https://www.fda.gov/media/139858/download>); the target is the N2 gene with a cycle threshold cut off value of 40. A standard curve was prepared with FDA reference panel material [heat inactivated virus from BEI Resources ([www.beiresources.org](http://www.beiresources.org))] using serial dilutions (in

triplicate) made in negative clinical matrix then spiked onto dry swabs, allowed to dry, and subsequently taken all the way through the process.

**Supplementary Table 1**  
**Abbott BinaxNow results, RT-PCR Ct values, and symptoms in RT-PCR-positive adults**

Age	Sex	PCR Result	Ct (N2)	Ct (RP)	Binax Result	COVID-19 symptoms?	Sore throat?	Cough?	Chills?	Body Aches?	Short of Breath?	Fever?	Runny Nose?	Congestion?	Nausea?	Vomiting?	Diarrhea?	Loss of Taste or Smell?	# Days Since Symptom Onset
21	F	POS	34.26	19.58	NEG	ASK													n/a
23	M	POS	35.48	25.16	NEG	ASK													n/a
26	M	POS	35.43	25.88	NEG	ASK													n/a
27	M	POS	35.17	24.26	NEG	ASK													n/a
28	F	POS	34.66	26.29	NEG	ASK													n/a
30	M	POS	35.19	20.77	NEG	ASK													n/a
33	M	POS	32.76	24.52	NEG	ASK													n/a
34	M	POS	32.36	22.42	NEG	ASK													n/a
38	F	POS	31.22	21.78	NEG	ASK													n/a
39	M	POS	37.03	28.61	NEG	ASK													n/a
48	M	POS	35.29	27.46	NEG	ASK													n/a
50	F	POS	34.87	21.31	NEG	ASK													n/a
50	F	POS	34.73	24.63	NEG	ASK													n/a
56	F	POS	32.3	26.75	NEG	ASK													n/a
60	F	POS	31.6	26.5	NEG	ASK													n/a
71	M	POS	33.2	19.62	NEG	ASK													n/a
91	M	POS	34.56	24.54	NEG	ASK													n/a
21	M	POS	14.62	23.23	POS	ASK													n/a
22	F	POS	32.89	30.74	POS	ASK													n/a
22	M	POS	27.74	22.13	POS	ASK													n/a
23	F	POS	18.75	25.23	POS	ASK													n/a
23	F	POS	26.75	24.18	POS	ASK													n/a
24	M	POS	29.67	21.5	POS	ASK													n/a
25	M	POS	14.1	19.83	POS	ASK													n/a
27	F	POS	20.69	27.21	POS	ASK													n/a
28	M	POS	23.63	27.99	POS	ASK													n/a
29	F	POS	22.21	24.08	POS	ASK													n/a
31	F	POS	17.55	27.16	POS	ASK													n/a
31	M	POS	14.57	22.16	POS	ASK													n/a
32	M	POS	28.17	24.67	POS	ASK													n/a
34	F	POS	22.47	27.53	POS	ASK													n/a
35	F	POS	17.39	23.93	POS	ASK													n/a
38	M	POS	26.95	24.65	POS	ASK													n/a
39	F	POS	20.82	29.82	POS	ASK													n/a
42	F	POS	13.65	22.24	POS	ASK													n/a
42	F	POS	28.4	25.58	POS	ASK													n/a
46	M	POS	12.82	20.87	POS	ASK													n/a
48	F	POS	16.4	24.47	POS	ASK													n/a
49	F	POS	22.3	23.42	POS	ASK													n/a
50	M	POS	16.35	24.14	POS	ASK													n/a
51	M	POS	26.91	23.37	POS	ASK													n/a
51	M	POS	17.16	23.86	POS	ASK													n/a
53	F	POS	25.78	23.3	POS	ASK													n/a
53	F	POS	21.4	23.19	POS	ASK													n/a
54	F	POS	28.3	21.6	POS	ASK													n/a
57	F	POS	21.66	24.84	POS	ASK													n/a
60	M	POS	28.65	26.5	POS	ASK													n/a
61	F	POS	15.64	26.47	POS	ASK													n/a
61	M	POS	24.4	27.67	POS	ASK													n/a
61	M	POS	21.61	27.39	POS	ASK													n/a
63	F	POS	25.94	28.19	POS	ASK													n/a
64	M	POS	32.01	23.85	POS	ASK													n/a
65	M	POS	26.09	21.92	POS	ASK													n/a
67	F	POS	15.4	24.6	POS	ASK													n/a
71	F	POS	28.45	22.76	POS	ASK													n/a
71	M	POS	32.83	25.58	POS	ASK													n/a
79	F	POS	20.55	24.67	POS	ASK													n/a
29	M	POS	32.54	24.93	NEG	SK		Y	Y			Y	Y	Y					2
32	F	POS	31.56	20.47	NEG	SK		Y	Y	Y			Y	Y					2
63	M	POS	33.77	24.45	NEG	SK		Y											1
19	M	POS	26.23	23.73	POS	SK	Y		Y	Y									3
20	F	POS	20.47	22.8	POS	SK	Y	Y	Y	Y			Y	Y					3
20	M	POS	27.87	24.95	POS	SK	Y	Y					Y	Y					4
20	M	POS	14.55	22.4	POS	SK							Y						0
21	F	POS	17.94	23.13	POS	SK		Y	Y		Y		Y	Y					2
21	M	POS	16.28	23.96	POS	SK		Y	Y	Y		Y	Y	Y					2
22	F	POS	20.59	21.94	POS	SK		Y			Y		Y	Y			Y	Y	3
23	F	POS	20.16	27.91	POS	SK				Y			Y	Y		Y		Y	3
23	F	POS	27.72	28.5	POS	SK	Y	Y	Y	Y		Y			Y				2
24	M	POS	20.41	28.39	POS	SK	Y		Y	Y		Y	Y	Y				Y	1
25	M	POS	29.26	22.36	POS	SK	Y	Y		Y			Y	Y				Y	4
25	F	POS	20.81	25.63	POS	SK		Y				Y	Y					Y	2
25	F	POS	19.47	21.79	POS	SK	Y	Y		Y			Y	Y				Y	3
25	M	POS	26.26	24.39	POS	SK	Y	Y	Y	Y		Y	Y						3
26	M	POS	15.62	24.26	POS	SK	Y						Y	Y					1
26	F	POS	19.19	22.21	POS	SK	Y	Y											2
27	F	POS	17.79	25.23	POS	SK	Y	Y	Y	Y			Y	Y					2

27	M	POS	15.95	24.3	POS	Sx	Y			Y			Y	Y	Y				2
27	F	POS	18.81	23.78	POS	Sx		Y	Y	Y		Y	Y						2
28	M	POS	25.41	24.61	POS	Sx			Y	Y		Y		Y		Y	Y		4
29	F	POS	16.5	21.78	POS	Sx												Y	0
29	M	POS	18.2	23.42	POS	Sx						Y							1
30	M	POS	27.23	29.61	POS	Sx		Y	Y	Y			Y	Y	Y				2
31	F	POS	25.48	24.96	POS	Sx	Y	Y	Y	Y	Y	Y	Y						3
31	F	POS	18.33	25.67	POS	Sx		Y	Y				Y						1
31	F	POS	21.89	26.98	POS	Sx		Y		Y	Y		Y	Y				Y	4
31	F	POS	15.21	23.27	POS	Sx	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	4
31	M	POS	16.17	21.38	POS	Sx		Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	0
32	F	POS	29.47	26.43	POS	Sx				Y		Y	Y	Y	Y		Y		6
32	F	POS	13.77	24.14	POS	Sx							Y						1
32	M	POS	26.76	24.76	POS	Sx		Y		Y			Y					Y	3
33	M	POS	24.36	21.6	POS	Sx			Y					Y				Y	3
33	F	POS	14.32	22.84	POS	Sx	Y	Y		Y			Y						1
33	F	POS	17.12	21.83	POS	Sx			Y	Y			Y	Y					1
34	M	POS	27.63	26.65	POS	Sx		Y		Y				Y			Y		2
34	F	POS	30.52	23.25	POS	Sx	Y			Y			Y	Y			Y	Y	5
34	M	POS	18.75	22.42	POS	Sx	Y	Y		Y			Y						3
35	F	POS	22.88	28.59	POS	Sx		Y	Y	Y	Y					Y		Y	1
35	F	POS	16.4	22.27	POS	Sx	Y			Y									1
35	F	POS	20.19	22.43	POS	Sx	Y	Y	Y	Y		Y	Y				Y	Y	3
35	M	POS	25.06	26.91	POS	Sx	Y	Y				Y						Y	2
35	M	POS	27.25	22.99	POS	Sx	Y	Y	Y	Y			Y	Y	Y				3
36	F	POS	22.81	27.54	POS	Sx		Y		Y			Y						1
37	F	POS	19.5	26.99	POS	Sx	Y			Y	Y		Y	Y	Y			Y	2
37	M	POS	22.18	21.61	POS	Sx	Y	Y	Y										2
38	M	POS	18.33	27.29	POS	Sx	Y	Y	Y		Y	Y	Y						6
38	F	POS	31.41	22.64	POS	Sx	Y	Y	Y	Y	Y		Y	Y	Y				1
38	F	POS	28.04	22.86	POS	Sx					Y							Y	2
39	M	POS	29.14	29.32	POS	Sx		Y	Y	Y	Y	Y	Y	Y				Y	6
39	F	POS	15.41	22.8	POS	Sx	Y	Y	Y	Y	Y	Y					Y		1
40	M	POS	20.77	24.58	POS	Sx		Y	Y	Y	Y							Y	1
40	F	POS	21.26	25.98	POS	Sx	Y	Y	Y	Y		Y	Y	Y					5
40	M	POS	23.03	20.72	POS	Sx	Y					Y						Y	2
41	M	POS	17.23	24.19	POS	Sx					Y								3
41	M	POS	19.24	21.43	POS	Sx	Y	Y		Y	Y	Y							2
42	M	POS	23.2	24.16	POS	Sx	Y	Y	Y	Y	Y	Y	Y				Y		2
44	F	POS	17.67	25.61	POS	Sx		Y	Y	Y									1
44	F	POS	15.2	22.19	POS	Sx	Y	Y		Y	Y								3
45	M	POS	18.7	23.76	POS	Sx		Y	Y										3
45	F	POS	21.15	24.76	POS	Sx	Y	Y	Y	Y		Y	Y	Y					3
46	F	POS	15.2	27.54	POS	Sx	Y	Y		Y			Y						2
47	F	POS	32.6	27.59	POS	Sx	Y	Y	Y	Y	Y			Y	Y		Y	Y	6
47	M	POS	26.77	23.56	POS	Sx	Y	Y	Y	Y		Y							5
48	F	POS	34.58	24.96	POS	Sx	Y	Y	Y	Y	Y	Y	Y				Y		3
48	M	POS	21.82	24.66	POS	Sx			Y	Y		Y		Y					2
49	M	POS	30.73	21.95	POS	Sx		Y											5
49	M	POS	19.16	21.67	POS	Sx					Y								0
50	F	POS	20.45	21.07	POS	Sx	Y	Y	Y	Y	Y	Y	Y						0
51	F	POS	16.57	26.99	POS	Sx		Y	Y	Y			Y	Y			Y		1
51	M	POS	15.46	21.47	POS	Sx	Y	Y	Y	Y									1
54	M	POS	24.18	24.5	POS	Sx		Y		Y		Y							1
54	F	POS	16.92	22.82	POS	Sx	Y	Y	Y		Y							Y	3
54	M	POS	11.78	18.96	POS	Sx				Y	Y	Y		Y				Y	1
57	M	POS	18.69	28.26	POS	Sx			Y	Y	Y	Y	Y	Y					1
57	F	POS	21.8	24.73	POS	Sx	Y	Y		Y		Y							1
60	F	POS	16.18	25.74	POS	Sx	Y			Y									1
61	M	POS	18.82	25.48	POS	Sx		Y	Y			Y	Y						2
65	F	POS	14.61	23.24	POS	Sx		Y	Y	Y			Y	Y					3
66	M	POS	15.35	18.78	POS	Sx	Y	Y	Y	Y	Y	Y	Y	Y	Y				3
67	M	POS	33.69	25.16	POS	Sx					Y		Y	Y					2
70	M	POS	26.78	26.3	POS	Sx	Y	Y	Y	Y	Y	Y	Y						0
70	M	POS	22	25.3	POS	Sx		Y											2
32	M	POS	34.2	26.37	NEG	Sx7+				Y	Y		Y				Y	Y	7+
32	F	POS	34.05	23.27	NEG	Sx7+												Y	7+
33	F	POS	33.79	25.58	NEG	Sx7+		Y		Y	Y			Y			Y		7+
43	M	POS	34.56	25.89	NEG	Sx7+		Y	Y	Y			Y	Y					7+
67	F	POS	30.4	25.95	NEG	Sx7+								Y					7+
19	F	POS	22.78	22.71	POS	Sx7+							Y	Y					7+
20	M	POS	29.39	22.48	POS	Sx7+				Y	Y			Y	Y				7+
25	F	POS	29.8	24.6	POS	Sx7+		Y					Y	Y					7+
30	F	POS	17.71	27.39	POS	Sx7+	Y	Y						Y					7+
30	M	POS	14.71	23.66	POS	Sx7+	Y	Y	Y										7+
34	M	POS	25.94	26.03	POS	Sx7+	Y	Y		Y			Y					Y	7+
43	F	POS	27.12	19.54	POS	Sx7+												Y	7+
50	F	POS	34.56	24.45	POS	Sx7+						Y	Y					Y	7+
53	M	POS	17.8	23.87	POS	Sx7+		Y	Y			Y							7+
68	M	POS	20.24	23.53	POS	Sx7+		Y			Y							Y	7+

F, female; M, male; POS, positive; Ct, cycle threshold; N2, SARS-CoV-2 target; RP, host control target; ASx, asymptomatic; Sx, symptomatic; n/a, not applicable

## Supplementary Table 2

### Abbott BinaxNow results, RT-PCR Ct values, and symptoms in RT-PCR-positive children

Age	Sex	PCR Result	Ct (N2)	Ct (RP)	Binax Result	COVID-19 symptoms?	Sore throat?	Cough?	Chills?	Body Aches?	Short of Breath?	Fever?	Runny Nose?	Congestion?	Nausea?	Vomiting?	Diarrhea?	Loss of Taste or Smell?	# Days Since Symptom Onset
0	F	POS	33.59	21.55	NEG	ASK													n/a
0	M	POS	29.89	20.61	NEG	ASK													n/a
1	M	POS	34.26	21.97	NEG	ASK													n/a
2	M	POS	37.1	26.4	NEG	ASK													n/a
3	F	POS	31.7	21.76	NEG	ASK													n/a
3	F	POS	26.7	19.84	NEG	ASK													n/a
3	F	POS	36.51	24.03	NEG	ASK													n/a
3	M	POS	28.93	21.76	NEG	ASK													n/a
3	M	POS	32.44	24.73	NEG	ASK													n/a
3	F	POS	32.31	22.46	NEG	ASK													n/a
5	M	POS	32.87	26.98	NEG	ASK													n/a
6	F	POS	26.82	22.58	NEG	ASK													n/a
7	F	POS	33.01	20.2	NEG	ASK													n/a
7	F	POS	30.99	21.65	NEG	ASK													n/a
7	F	POS	33.72	23.35	NEG	ASK													n/a
7	M	POS	36.31	24.21	NEG	ASK													n/a
8	M	POS	34.62	22.23	NEG	ASK													n/a
9	M	POS	34.34	22.58	NEG	ASK													n/a
9	M	POS	27.42	21.64	NEG	ASK													n/a
10	F	POS	32.47	22.45	NEG	ASK													n/a
10	M	POS	34.07	25.45	NEG	ASK													n/a
12	F	POS	27.45	24.01	NEG	ASK													n/a
12	M	POS	39.84	24.35	NEG	ASK													n/a
12	M	POS	23.43	20.22	NEG	ASK													n/a
12	F	POS	32.83	24.29	NEG	ASK													n/a
13	F	POS	26.89	21.82	NEG	ASK													n/a
14	F	POS	32.78	23.33	NEG	ASK													n/a
15	F	POS	36.84	20.19	NEG	ASK													n/a
15	F	POS	33.39	22.53	NEG	ASK													n/a
16	M	POS	36.5	19.31	NEG	ASK													n/a
16	F	POS	33.08	22.33	NEG	ASK													n/a
16	F	POS	33.5	19.98	NEG	ASK													n/a
16	F	POS	35.4	22.32	NEG	ASK													n/a
17	F	POS	34.88	24.47	NEG	ASK													n/a
17	M	POS	34.47	25.58	NEG	ASK													n/a
18	F	POS	32.22	21.37	NEG	ASK													n/a
18	F	POS	33.9	26.17	NEG	ASK													n/a
0	M	POS	13.48	23.3	POS	ASK													n/a
0	F	POS	17.72	27.64	POS	ASK													n/a
0	F	POS	32.61	20.25	POS	ASK													n/a
1	F	POS	27.34	21.61	POS	ASK													n/a
1	M	POS	14.35	20.71	POS	ASK													n/a
1	M	POS	19.05	26.8	POS	ASK													n/a
2	F	POS	29.77	25.68	POS	ASK													n/a
2	F	POS	25.61	19.76	POS	ASK													n/a
2	M	POS	16.75	20.83	POS	ASK													n/a
2	F	POS	21.51	20.22	POS	ASK													n/a
2	F	POS	22.88	20.41	POS	ASK													n/a
3	F	POS	23.96	22.89	POS	ASK													n/a
3	F	POS	20.94	20.45	POS	ASK													n/a
3	M	POS	25.56	20.35	POS	ASK													n/a
4	M	POS	21.68	19	POS	ASK													n/a
5	M	POS	27.84	18.48	POS	ASK													n/a
6	F	POS	29.61	19.83	POS	ASK													n/a
6	M	POS	17.63	21.84	POS	ASK													n/a
6	M	POS	13.11	20.96	POS	ASK													n/a
6	M	POS	21.53	24.64	POS	ASK													n/a
7	M	POS	27.57	22.55	POS	ASK													n/a
7	F	POS	21.51	22.87	POS	ASK													n/a
7	M	POS	14.5	23.54	POS	ASK													n/a
7	M	POS	22.1	28.85	POS	ASK													n/a
7	F	POS	27.82	23.9	POS	ASK													n/a
7	F	POS	29.83	20.78	POS	ASK													n/a
7	F	POS	18.13	24.45	POS	ASK													n/a
8	F	POS	18.38	28.23	POS	ASK													n/a
8	F	POS	15.28	22.14	POS	ASK													n/a
8	F	POS	14.66	20.35	POS	ASK													n/a

8	F	POS	32.73	21.97	POS	ASx															n/a
8	M	POS	22.99	22.95	POS	ASx															n/a
8	F	POS	22.4	24.28	POS	ASx															n/a
9	F	POS	19.96	22.67	POS	ASx															n/a
9	F	POS	15.45	21.72	POS	ASx															n/a
9	F	POS	23.99	19.95	POS	ASx															n/a
9	M	POS	34.59	22.05	POS	ASx															n/a
9	M	POS	20.54	23.4	POS	ASx															n/a
9	F	POS	14.54	21.84	POS	ASx															n/a
10	M	POS	35.88	25.08	POS	ASx															n/a
10	F	POS	26.85	24.5	POS	ASx															n/a
11	F	POS	16.98	24.86	POS	ASx															n/a
11	M	POS	33	26.48	POS	ASx															n/a
11	M	POS	29.63	20.77	POS	ASx															n/a
12	F	POS	17.77	23.91	POS	ASx															n/a
12	F	POS	19.38	21.69	POS	ASx															n/a
12	M	POS	28.13	24.42	POS	ASx															n/a
12	M	POS	26.13	21.43	POS	ASx															n/a
13	F	POS	21.41	26.51	POS	ASx															n/a
13	M	POS	15.02	23.09	POS	ASx															n/a
13	M	POS	18.81	22.28	POS	ASx															n/a
14	M	POS	23	23.72	POS	ASx															n/a
14	F	POS	34.35	25.54	POS	ASx															n/a
14	F	POS	25.82	24.55	POS	ASx															n/a
15	M	POS	23.74	20.75	POS	ASx															n/a
15	M	POS	32.1	22.45	POS	ASx															n/a
15	F	POS	21.48	22.93	POS	ASx															n/a
15	M	POS	24.18	22.59	POS	ASx															n/a
15	M	POS	16.09	23.35	POS	ASx															n/a
15	F	POS	21.04	23.6	POS	ASx															n/a
15	F	POS	20.9	23.6	POS	ASx															n/a
15	F	POS	30.4	25.71	POS	ASx															n/a
16	M	POS	16.99	21.01	POS	ASx															n/a
16	F	POS	18.29	23.6	POS	ASx															n/a
17	F	POS	19.81	21.22	POS	ASx															n/a
17	F	POS	18.1	22.44	POS	ASx															n/a
17	F	POS	17.2	24.71	POS	ASx															n/a
17	F	POS	24.45	24.72	POS	ASx															n/a
17	F	POS	21.3	26.47	POS	ASx															n/a
18	F	POS	35.73	23.96	POS	ASx															n/a
12	F	POS	27.2	22.72	NEG	Sx				Y		Y		Y							0
12	F	POS	35.74	25.98	NEG	Sx				Y						Y		Y			1
14	F	POS	31.43	27.78	NEG	Sx		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			4
15	F	POS	34.2	27.7	NEG	Sx		Y								Y					1
1	M	POS	13.91	19.02	POS	Sx		Y								Y					6
1	M	POS	15.21	25.39	POS	Sx								Y	Y	Y					1
7	F	POS	26.84	26.63	POS	Sx				Y											2
9	M	POS	32.74	22.38	POS	Sx				Y	Y	Y	Y	Y	Y					Y	1
9	F	POS	14.62	22.48	POS	Sx				Y		Y	Y	Y		Y					2
10	F	POS	26.34	25.6	POS	Sx		Y												Y	2
10	F	POS	20.87	26.76	POS	Sx					Y					Y	Y	Y			1
11	M	POS	16.5	25.98	POS	Sx		Y	Y	Y						Y	Y			Y	2
11	M	POS	27.67	20.53	POS	Sx		Y								Y					4
12	M	POS	26.22	26.25	POS	Sx		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			5
14	F	POS	12.21	23.05	POS	Sx		Y	Y	Y	Y	Y	Y			Y	Y				3
14	F	POS	21.13	22.5	POS	Sx		Y	Y	Y	Y	Y									2
14	F	POS	20.34	22.95	POS	Sx		Y		Y	Y				Y			Y			2
14	M	POS	17.74	23.27	POS	Sx		Y	Y	Y	Y	Y	Y			Y	Y	Y			7
16	F	POS	26.61	25.71	POS	Sx		Y	Y		Y	Y	Y			Y				Y	6
17	F	POS	21.69	26.48	POS	Sx				Y		Y					Y			Y	4
17	F	POS	25.69	23.37	POS	Sx		Y	Y	Y				Y						Y	0
18	F	POS	24.75	27.03	POS	Sx		Y													1
18	M	POS	14.9	21.68	POS	Sx			Y			Y	Y								1
18	F	POS	30.63	22.9	POS	Sx		Y			Y					Y	Y	Y			1
18	F	POS	23.55	20.27	POS	Sx		Y		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	4
18	M	POS	15.69	21.66	POS	Sx			Y		Y					Y	Y				1
2	F	POS	27.65	25.53	POS	Sx7+				Y		Y								Y	15
18	F	POS	26.79	27.71	POS	Sx7+				Y		Y					Y	Y		Y	11

F, female; M, male; POS, positive; Ct, cycle threshold; N2, SARS-CoV-2 target; RP, host control target; ASx, asymptomatic; Sx, symptomatic; n/a, not applicable



### Supplementary Table 3

#### Distribution of positive and negative BinaxNOW and RT-PCR results across clinical subgroups

Asymptomatic (Children: ≤18 yo)			
BinaxNOW Ag	RT-PCR		
	Positive	Negative	Total
Positive	70	7	77
Negative	37	715	752
Total (12.9% prevalence)	107	722	829

Asymptomatic (Adults: >18 yo)			
BinaxNOW Ag	RT-PCR		
	Positive	Negative	Total
Positive	40	4	44
Negative	17	913	930
Total (5.9% prevalence)	57	917	974

Symptomatic ≤7 days (Children: ≤18 yo)			
BinaxNOW Ag	RT-PCR		
	Positive	Negative	Total
Positive	22	0	22
Negative	4	65	69
Total (28.6% prevalence)	26	65	91

Symptomatic ≤7 days (Adults: >18 yo)			
BinaxNOW Ag	RT-PCR		
	Positive	Negative	Total
Positive	82	0	82
Negative	3	270	273
Total (23.9% prevalence)	85	270	355

Symptomatic (Children: >7 days)			
BinaxNOW Ag	RT-PCR		
	Positive	Negative	Total
Positive	2	0	2
Negative	0	6	6
Total (25% Prevalence)	2	6	8

Symptomatic (Adults: >7 days)			
BinaxNOW Ag	RT-PCR		
	Positive	Negative	Total
Positive	10	1	11
Negative	5	35	40
Total (29.4% prevalence)	15	36	51

## Supplementary Table 4

**Predictive value of the Abbott BinaxNOW for detection of SARS-CoV-2 in samples from adult and pediatric ( $\leq 18$ ) patients, with varying prevalence, based on observed sensitivity/specificity in each subgroup.**

	Prevalence			
	20%	10%	5%	1%
<b>PPV</b>				
Adult, Sx $< 7D$	100%	100%	100%	100%
Adult, ASx	97.65% (93.91-99.12)	94.87% (87.27-98.03)	89.75% (76.45-95.93)	62.68% (38.39-81.91)
Pediatric, Sx $< 7D$	100%	100%	100%	100%
Pediatric, ASx	93.41% (88.32-96.38)	86.30% (77.06-92.20)	74.91% (61.41-84.85)	36.42% (23.40-51.80)
<b>NPV</b>				
Adult, Sx $\leq 7D$	99.17% (98.38-99.58)	99.63% (99.27-99.81)	99.82% (99.65-99.91)	99.97% (99.93-99.98)
Adult, ASx	93.15% (90.11-95.30)	96.83% (95.35-97.85)	98.47% (97.74-98.97)	99.70% (99.56-99.80)
Pediatric, Sx $\leq 7D$	96.30% (95.20-97.15)	98.32% (97.81-98.71)	99.20% (98.95-99.39)	99.84% (99.80-99.88)
Pediatric, ASx	91.89% (89.95-93.49)	96.23% (95.27-97.00)	98.18% (97.70-98.55)	99.64% (99.55-99.72)

PPV and NPV were calculated using the sensitivity and specificity observed in each subgroup for a hypothetical population of 1000 individuals per subgroup, with varying prevalence. PPV, positive predictive value; NPV, negative predictive value; Sx, symptomatic; ASx, asymptomatic; D, days

## Supplementary Table 5

### Performance of the Abbott BinaxNOW versus RT-PCR with varied Ct value cutoffs

	All Ct Values				Ct values $\leq 35$				Ct values $\leq 30$				Ct values $\leq 25$			
	N	TP (+/+)	FN (+/-)	Sens	N	TP (+/+)	FN (+/-)	Sens	N	TP (+/+)	FN (+/-)	Sens	N	TP (+/+)	FN (+/-)	Sens
Combined All	292	226	66	77.4%	276	224	52	81.2%	214	205	9	95.8%	150	149	1	99.3%
All Children (Sx, ASx)	135	94	41	69.6%	125	92	33	73.6%	92	83	9	90.2%	62	61	1	98.4%
All Adult (Sx, ASx)	157	132	25	84.1%	151	132	19	87.4%	122	122	0	100.0%	88	88	0	100%
Sx ( $\leq 7D$ ) Children	26	22	4	84.6%	25	22	3	88.0%	21	20	1	95.2%	14	14	0	100%
Sx ( $\leq 7D$ ) Adult	85	82	3	96.5%	85	82	3	96.5%	76	76	0	100.0%	59	59	0	100%
ASx Children	107	70	37	65.4%	98	68	30	69.4%	69	61	8	88.4%	48	47	1	97.9%
ASx Adult	57	40	17	70.2%	51	40	11	78.4%	37	37	0	100.0%	24	24	0	100%

Ct, cycle threshold; TP, true positive (RT-PCR positive/BinaxNOW positive); FN, false negative (RT-PCR positive/BinaxNOW negative); Sens, sensitivity; Sx, symptomatic; ASx, asymptomatic; D, days; Ped, pediatric

**Supplementary Table 6**

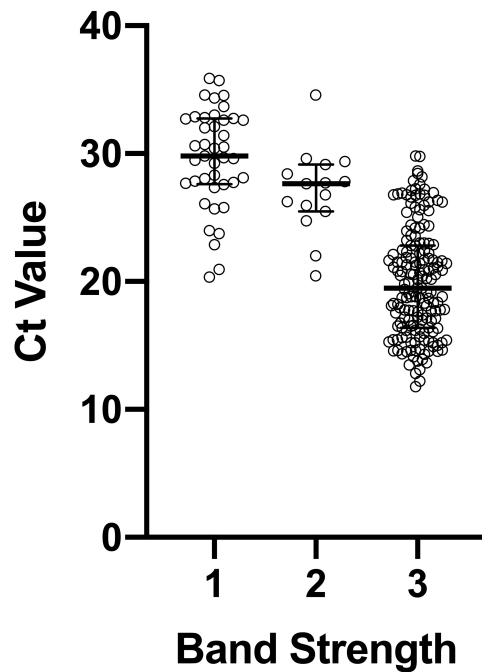
**Impact of temperature on BinaxNOW performance in individuals  $\leq 7$  days post symptom onset**

BinaxNOW result	RT-PCR result					
	Temperature range: $\geq 59^{\circ}\text{F}$			Temperature range: 46-58.5 $^{\circ}\text{F}$		
	Positive	Negative	Total	Positive	Negative	Total
Positive	104	0	104	6	1	7
Negative	7	335	342	3	20	23
Total	111	335	446	9	21	30
Sensitivity	(104/111) 93.7%			(6/9) 66.7%		
Specificity	(335/335) 100.0%			(20/21) 95.2%		

The manufacturer recommends that tests be run at temperatures  $\geq 59^{\circ}\text{F}$ . Ag, antigen; Sx, symptoms

## Supplementary Figure 1

### Correlation of Cycle Threshold with BinaxNOW band strength



Band strength (1= faint, n = 41; 2 = medium, n = 15; 3 = strong, n = 170) as interpreted by the first reader for the 226 true positive BinaxNOW tests correlated clearly with Ct value, with median Cts of 29.7 (27.6-32.7), 27.7 (25.5-29.1), and 19.5 (16.4-22.8), respectively.