Supplemental Online Content

Chu VT, Schwartz NG, Donnelly MAP, et al; COVID-19 Household Transmission Team. Comparison of home antigen testing with RT-PCR and viral culture during the course of SARS-CoV-2 infection. *JAMA Intern Med*. Published online April 29, 2022. doi:10.1001/jamainternmed.2022.1827

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

eTable 1. Forms Used to Observe Home Antigen Test Use and Acceptability

Observed user administration error form (one per household)	Did any household members drop, touch, or otherwise contaminate the swab before letting the swab sit in the solution?	☐ Yes ☐ No
	Did all household members swab both nares?	☐ Yes ☐ No
	Did all household members insert the swab ½ to ¾ inch?	☐ Yes ☐ No
	Did all household members use a 1 minute duration to let the swab sit in the solution?	☐ Yes ☐ No
	Did all household members remove the swab before placing the test strip?	☐ Yes ☐ No
	Did all household members wait 10 minutes before removing and reading the test strip?	☐ Yes ☐ No
	Any other observations?	Free text
User acceptability survey (one per individual)	Did you have any difficulties collecting their own nasal swabs at home?	☐ Yes ☐ No
	What were the difficulties?	Free text
	Now that you have been doing this test for two weeks, what improvements do you think could be made in the directions?	Free text
	If you were able to choose to provide only one specimen, which one would you prefer to provide?	☐ Nasal swab at home ☐ Saliva ☐ NP swab ☐ No preference ☐ Not applicable ☐ Refused
	If this test was available over the counter, would you be more likely to test yourself for COVID-19?	☐ Yes ☐ No
	Any additional comments or notes?	Free text

eTable 2. Home Antigen Tests and Nasopharyngeal Swabs Completed by Participants with RT-PCR–Confirmed SARS-CoV-2 Infection, by Days from Illness Onset

	No. (%)	
Days from illness onset	**Home antigen tests (n=3,044)**	**Nasopharyngeal swabs (n=642)**
<-5 (before illness onset)	25 (1)	3 (<1)
-5 to -1 (before illness onset)	42 (1)	17 (3)
0	28 (1)	20 (3)
1 to 5	468 (15)	167 (26)
6 to 10	935 (31)	165 (26)
11 to 15	911 (30)	98 (15)
16 to 20	529 (17)	124 (19)
>20	106 (3)	48 (7)

Abbreviation: RT-PCR, reverse transcription–polymerase chain reaction.

eTable 3. Home Antigen Test Results by Participant Case Status

	Participant case status[a]		
Home antigen test result[b]	**Case**	**Not a case**	**Total**
Positive	840	7	847
Negative	2,193[c]	1,929	4,122
Invalid	5	3	8
Total	3,038	1,939	4,977

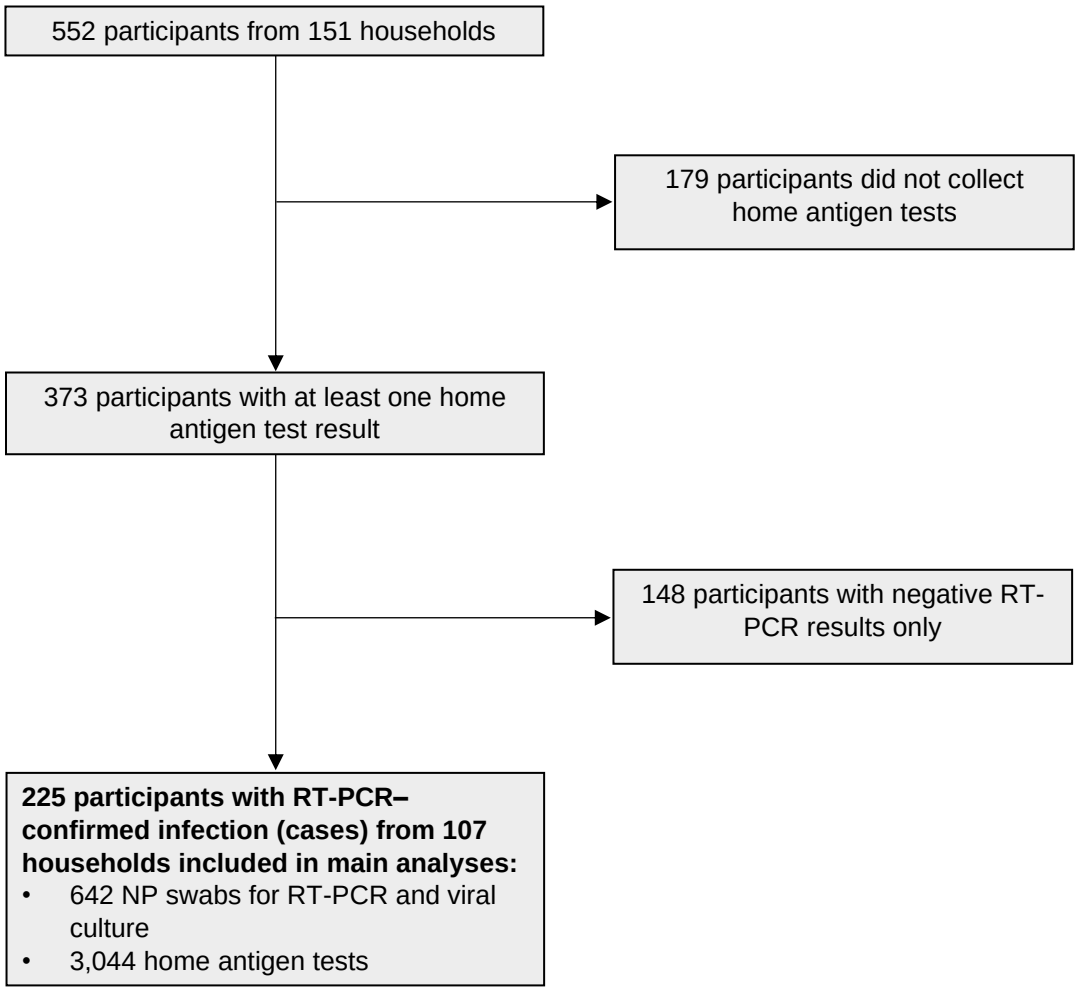
[a]This table includes all participants in the household transmission investigation who collected at least one home antigen test, regardless of their case status. Cases were defined as participants who had at least one positive reverse transcription–polymerase chain reaction (RT-PCR) test during the investigation.
[b]Test results displayed are the participant interpretation of the home antigen tests. For 51 home antigen tests where the participant did not provide an interpretation of the result, the investigator interpretation was used.
[c]Of the 2,193 negative home antigen test results among cases, only 602 (27%) were performed during the infectious period (2 days before illness onset through 10 days after illness onset). Only tests performed during the infectious period were included in sensitivity calculations. Illness onset was defined as symptom onset date if symptomatic or first positive RT-PCR test collection date if asymptomatic.

eTable 4. Participant and Investigator Interpretation of Home Antigen Test Results

	Investigator interpretation				
Participant interpretation	**Positive**	**Negative**	**Invalid[a]**	**Not available[b]**	**Total**
Positive	754	33	0	41	828
Negative	13	2,007	1	152	2,173
Invalid[a]	0	0	0	6	6
Not available[b]	12	25	0	0	37
Total	779	2,065	1	199	3,044

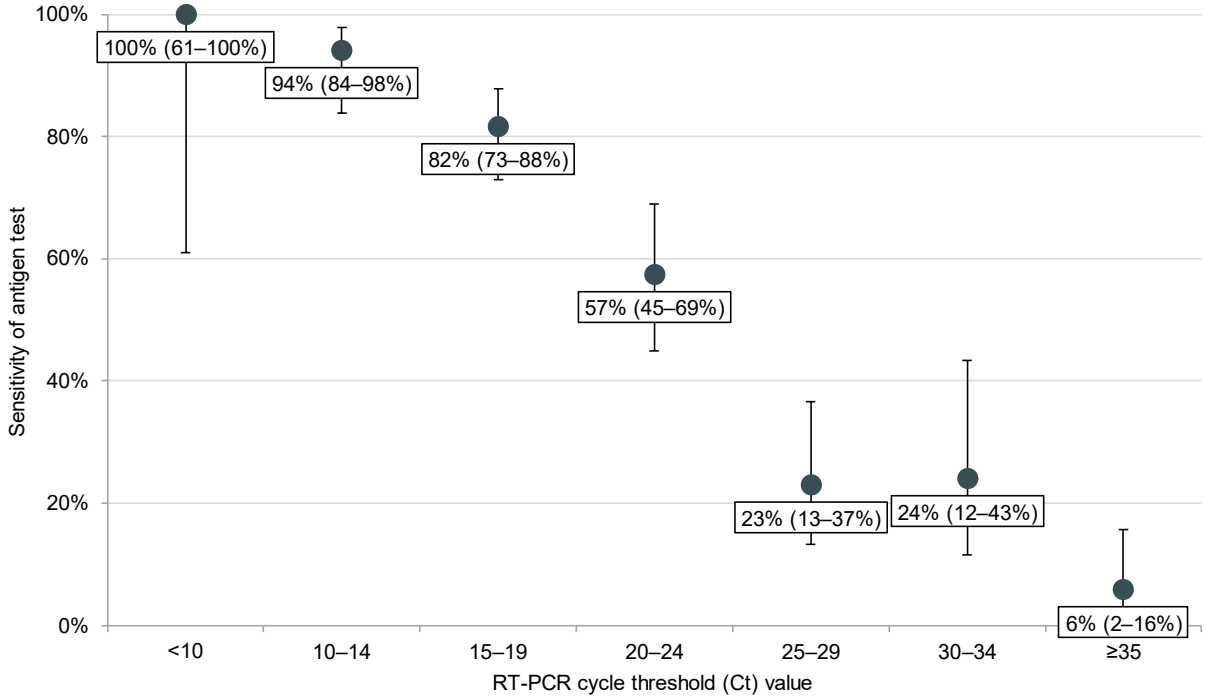
[a]Per the manufacturer's instructions, antigen tests were invalid if the positive control line on the antigen test strip did not appear. [b]Participant interpretation was not available if the participant did not submit their interpretation of the antigen test result. In these instances, investigator interpretation was still available if the participant submitted a photo of the antigen test strip. Invesitgator interpretation was not available if no photo was submitted and the investigator was unable to review the antigen test strip.

eFigure 1. Flow Diagram for Participants with RT-PCR–Confirmed SARS-CoV-2 Infection and At Least One Home Antigen Test Result



Abbreviation: RT-PCR, reverse transcription–polymerase chain reaction; NP, nasopharyngeal.

eFigure 2. Sensitivity of Home Antigen Tests by RT-PCR Cycle Threshold Value



Dots represent the sensitivity of home antigen tests to detect a positive reverse transcription–polymerase chain reaction (RT-PCR) test collected on the same day. Results are stratified by the RT-PCR cycle threshold (Ct) value for the N-gene target. Error bars and numbers in parentheses represent 95% confidence intervals, calculated using the Wilson score interval method.